

SEARCH REQUEST FORM

Scientific and Technical Information Center

9EOZ

Requester's Full Name: HARDET Examiner #: _____ Date: 5/25
 Art Unit: 1751 Phone Number 305-5599 Serial Number: 09/319,108
 Mail Box and Bldg/Room Location: 9336 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Whatever you can find.
Thanks

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Q<sub>1</sub> = ST

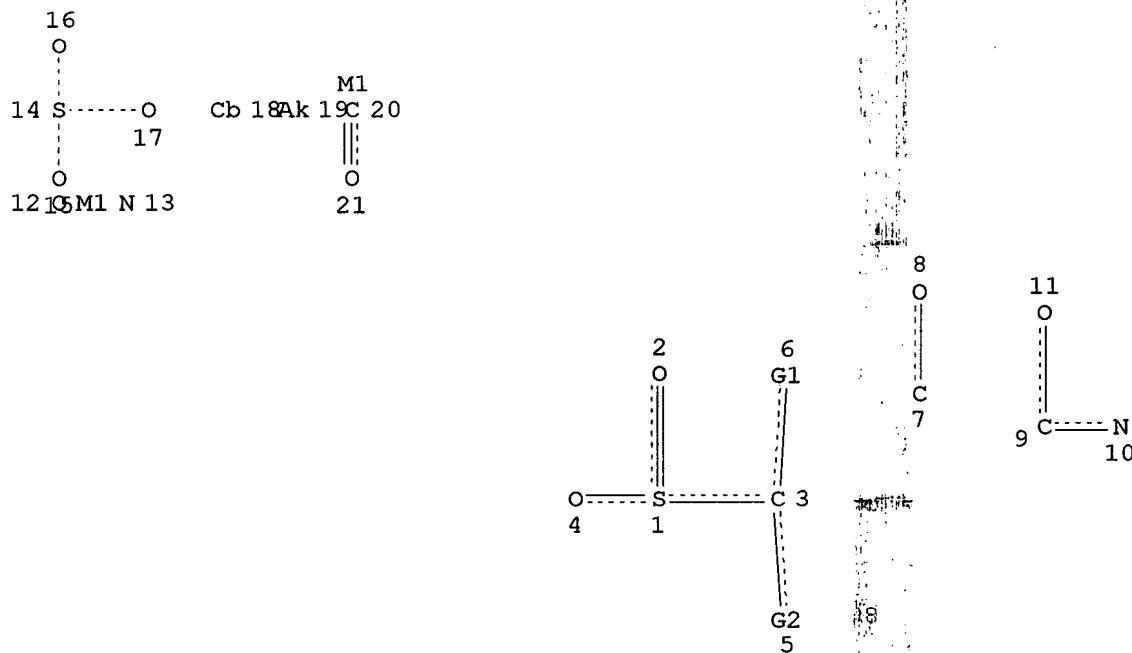
R<sub>3</sub> = COOM OR CODR4

| STAFF USE ONLY                         |  | Type of Search         | Vendors and cost where applicable |
|----------------------------------------|--|------------------------|-----------------------------------|
| Searcher: <u>708</u>                   |  | NA Sequence (#) _____  | STN _____                         |
| Searcher Phone #: <u>X 4139</u>        |  | AA Sequence (#) _____  | Dialog _____                      |
| Searcher Location: <u>ETR - 1700</u>   |  | Structure (#) <u>7</u> | Questel/Orbit _____               |
| Date Searcher Picked Up: _____         |  | Bibliographic _____    | Dr. Link _____                    |
| Date Completed: <u>5.31.04</u>         |  | Litigation _____       | Lexis/Nexis _____                 |
| Searcher Prep & Review Time: <u>55</u> |  | Fulltext _____         | Sequence Systems _____            |
| Clerical Prep Time: <u>8</u>           |  | Patent Family _____    | WWW/Internet _____                |
| Online Time: <u>45</u>                 |  | Other _____            | Other (specify) _____             |

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Hardee 09/319, 108

L5 STR



VAR G1=12/13  
VAR G2=14/18/19/20/7/9

NODE ATTRIBUTES:

HCOUNT IS M1 AT 12  
HCOUNT IS M1 AT 20  
NSPEC IS C AT 1  
NSPEC IS C AT 2  
NSPEC IS C AT 3  
NSPEC IS C AT 4  
NSPEC IS C AT 5  
NSPEC IS C AT 6  
NSPEC IS C AT 7  
NSPEC IS C AT 8  
NSPEC IS C AT 9  
NSPEC IS C AT 10  
NSPEC IS C AT 11  
DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 1 2 3 4 7 8 9 10 11 12 13 14 15 16 17 18 19  
20 21

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L7 1916 SEA FILE=REGISTRY SSS FUL L5  
L8 977 SEA FILE=HCAPLUS ABB=ON PLU=ON L7  
L9 73568 SEA FILE=HCAPLUS ABB=ON PLU=ON (INDUSTRIAL ORGANIC CHEMICALS,  
LEATHER, FATS, AND WAXES)/SC, SX  
L10 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 AND L9

L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1999:761138 HCAPLUS  
 DN 131:336739

TI Synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purification by precipitation of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration

IN Prakash, Indra; Guo, Zhi  
 PA The NutraSweet Company, USA  
 SO U.S., 4 pp.  
 CODEN: USXXAM

DT Patent  
 LA English  
 IC ICM C07C045-63  
 NCL 568490000

CC 23-14 (Aliphatic Compounds)  
 Section cross-reference(s): 45, 48

FAN.CNT 1

|    | PATENT NO.                                                                                                                                                                                                                                                                                                                                            | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|----------|
| PI | US 5994593                                                                                                                                                                                                                                                                                                                                            | A    | 19991130 | US 1998-154150  | 19980917 |
|    | WO 2000015592                                                                                                                                                                                                                                                                                                                                         | A1   | 20000323 | WO 1999-US21349 | 19990916 |
|    | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
|    | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG                                                                                                                                                                    |      |          |                 |          |

PRAI US 1998-154150 19980917

AB 3,3-Dimethylbutyraldehyde is synthesized via hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane in the presence of water and a base (e.g., zinc oxide) and is purified via formation of the aldehyde-bisulfite adduct, pptn., washing with org. solvents (e.g., MTBE), and acid or base (e.g., NaHCO3) regeneration of the aldehyde.

ST dimethylbutyraldehyde hydrolysis manuf purifn; dichlorodimethylbutane hydrolysis manuf dimethylbutyraldehyde; bromochlorodimethylbutane hydrolysis manuf dimethylbutyraldehyde; bisulfite adduct dimethylbutyraldehyde pptn

IT Carboxylic acids, uses

RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (esters, solvents; in purifn. of the 3,3-dimethylbutyraldehyde-bisulfite adduct)

IT Purification  
 (of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and formation and pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde)

IT Precipitation (chemical)  
 (purifn. of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and formation and pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT Alcohols, uses

Esters, uses

Ethers, uses

Hydrocarbons, uses

RL: NUU (Nonbiological use, unclassified); USES (Uses)

(solvents; in pur*Best Available Copy* dimethylbutyraldehyde-bisulfite adduct)

IT Hydrolysis

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane)

IT 67-63-0, 2-Propanol, uses 108-88-3, Toluene, uses 110-54-3, Hexane, uses 110-82-7, Cyclohexane, uses 141-78-6, Acetic acid ethyl ester, uses 142-82-5, Heptane, uses 1634-04-4, Mtbe

RL: NUU (Nonbiological use, unclassified); USES (Uses)

(solvent; synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 250155-17-0P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 2987-16-8P, 3,3-Dimethylbutyraldehyde

RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 7732-18-5, Water, reactions

RL: NUU (Nonbiological use, unclassified); RCT (Reactant); USES (Uses)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

IT 144-55-8, Sodium bicarbonate, reactions 298-14-6, Potassium bicarbonate 471-34-1, Calcium carbonate, reactions 497-19-8, Sodium carbonate, reactions 584-08-7, Potassium carbonate 1314-13-2, Zinc oxide, reactions 1344-28-1, Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), reactions 3486-35-9, Zinc carbonate 6130-96-7, 1,1-Dichloro-3,3-dimethylbutane 7558-79-4, Disodium hydrogenphosphate 7558-80-7, Sodium dihydrogenphosphate 7631-90-5, Sodium bisulfite 7664-38-2, Phosphoric acid, reactions 7664-93-9, Sulfuric acid, reactions 7758-11-4, Dipotassium hydrogenphosphate 7778-77-0, Potassium dihydrogenphosphate 53268-47-6

RL: RCT (Reactant)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

RE.CNT 9

RE

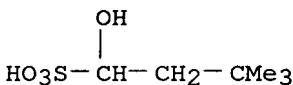
- (1) Anon; RU 721400 1980
- (2) Botteron, D; J Org Chem 1962, V27, P1059
- (3) Brandstrom, A; Acta Chem Scand 1959, V13(3), P610
- (4) Claude; US 5510508 1996
- (5) Nofre; US 5480668 1996
- (6) Perrin; Purification of Laboratory Chemicals 2nd edition 1980, P46
- (7) Perrin, D; Purification of Laboratory Chemicals 3rd ed 1988, P60
- (8) Prakash; US 5728862 1998 HCAPLUS
- (9) Schmerling, L; J Am Chem Soc 1946, V68, P1650

IT 250155-17-0P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(synthesis of 3,3-dimethylbutyraldehyde via base hydrolysis of 1,1-dichloro-3,3-dimethylbutane or 1-bromo-1-chloro-3,3-dimethylbutane and purifn. by pptn. of the aldehyde-bisulfite adduct with rinsing and aldehyde regeneration)

RN 250155-17-0 HCAPLUS Best Available Copy  
CN 1-Butanesulfonic acid, 1-hydroxy-3,3-dimethyl-, monosodium salt (9CI) (CA  
INDEX NAME)



● Na

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2000 ACS  
AN 1999:330068 HCAPLUS

DN 130:337845

TI High-yield synthesis of 3,3-dimethylbutyraldehyde via the liquid-phase oxidation of 1-chloro-3,3-dimethylbutane with inorganic bromides or iodides in dimethyl sulfoxide

IN Guo, Zhi; Prakash, Indra

PA The Nutrasweet Company, USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C07C045-63

NCL 568490000

CC 23-14 (Aliphatic Compounds)

Section cross-reference(s): 17, 45, 48

FAN.CNT 1

|    | PATENT NO. | KIND                                                                                                                                                                                                                                                                                                                                       | DATE     | APPLICATION NO. | DATE     |
|----|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|----------|
| PI | US 5905175 | A                                                                                                                                                                                                                                                                                                                                          | 19990518 | US 1998-81609   | 19980520 |
|    | WO 9959951 | A1                                                                                                                                                                                                                                                                                                                                         | 19991125 | WO 1999-US9919  | 19990507 |
|    | W:         | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |          |
|    | RW:        | GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG                                                                                                                                                                 |          |                 |          |

PRAI US 1998-81609 19980520

OS CASREACT 130:337845

AB 3,3-Dimethylbutyraldehyde, an intermediate in the manuf. of aspartame (no data), is prep'd. in a reproducible and highly economical manner and in very high purity by the oxidn. of 1-chloro-3,3-dimethylbutane (prep'd. by the addn. of tert-Bu chloride with ethylene in the presence of AlCl<sub>3</sub>) dissolved in DMSO with an inorg. bromide (e.g., NaBr) or iodide and in the presence of a base (e.g., ZnO) followed by purifn. of the crude product via the formation of an aldehyde-bisulfite adduct.

ST dimethylbutyraldehyde prep'n oxidn chlorodimethylbutane; purifn dimethylbutyraldehyde bisulfite addn product

IT Secondary amines

RL: RCT (Reactant)

(bases; high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane in the presence of)

IT Bases, reactions

RL: RCT (Reactant)

(high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane in the presence of)

IT Oxidation

(liq.-phase; of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO in the high-yield prep'n. of 3,3-dimethylbutyraldehyde)

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                       |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Purification<br>(of crude 3,3-dimethylbutyraldehyde via the sodium bisulfite addn. product)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Best Available Copy                                                                                                                                                   |
| IT | Bromides, reactions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                       |
|    | Iodides, reactions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                       |
|    | RL: RCT (Reactant)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (oxidants the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane to 3,3-dimethylbutyraldehyde)                                                                          |
| IT | Alcohols, uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                       |
|    | Esters, uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                       |
|    | Ethers, uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                       |
|    | Hydrocarbons, uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                       |
|    | RL: NUU (Nonbiological use, unclassified); USES (Uses)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (solvents; in the high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO) |
| IT | 7446-70-0, Aluminum chloride, uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                       |
|    | RL: CAT (Catalyst use); USES (Uses)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)                  |
| IT | 2855-08-5P, 1-Chloro-3,3-dimethylbutane 44870-96-4P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                       |
|    | RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)                  |
| IT | 2987-16-8P, 3,3-Dimethylbutyraldehyde                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                       |
|    | RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)                  |
| IT | 67-68-5, Dmso, uses 7732-18-5, Water, uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                       |
|    | RL: NUU (Nonbiological use, unclassified); USES (Uses)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)                  |
| IT | 74-85-1, Ethylene, reactions 110-86-1, Pyridine, reactions 144-55-8, Sodium bicarbonate, reactions 298-14-6, Potassium bicarbonate 471-34-1, Calcium carbonate, reactions 497-19-8, Sodium carbonate, reactions 507-20-0, tert-Butyl chloride 546-93-0, Magnesium carbonate 584-08-7, Potassium carbonate 1305-78-8, Calcium oxide, reactions 1314-13-2, Zinc oxide, reactions 1344-28-1, Aluminum oxide, reactions 3486-35-9, Zinc carbonate 7550-35-8, Lithium bromide 7558-79-4 7558-80-7, Sodium dihydrogenphosphate 7601-54-9, Sodium phosphate 7631-90-5, Sodium bisulfite 7647-01-0, Hydrochloric acid, reactions 7647-15-6, Sodium bromide, reactions 7664-38-2, Phosphoric acid, reactions 7664-41-7, Ammonia, reactions 7664-93-9, Sulfuric acid, reactions 7681-11-0, Potassium iodide, reactions 7681-82-5, Sodium iodide, reactions 7699-45-8, Zinc bromide 7727-15-3, Aluminum bromide 7757-87-1 7758-02-3, Potassium bromide, reactions 7758-11-4 7758-87-4, Calcium phosphate 7778-53-2, Potassium phosphate 7778-77-0, Potassium dihydrogenphosphate 7784-23-8, Aluminum iodide 7789-41-5, Calcium bromide 7789-48-2, Magnesium bromide 10102-68-8, Calcium iodide 10139-47-6, Zinc iodide 10361-65-6, Ammonium phosphate 10377-51-2, Lithium iodide 10377-58-9, Magnesium iodide 12027-06-4, Ammonium iodide 12027-06-4D, Ammonium iodide, tetraalkyl derivs. 12124-97-9, Ammonium bromide 12124-97-9D, Ammonium bromide, tetraalkyl derivs. |                                                                                                                                                                       |
|    | RL: RCT (Reactant)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)                  |

RE.CNT 19

RE

(1) Acta Chem Scand 1959, V13, p612

(2) Anon; EP 0374952 1990 **Best Available Copy**  
 (3) Anon; EP 0391652 1990 HCPLUS  
 (4) Babler; US 4175204 1979 HCPLUS  
 (5) Cheung, C; J Org Chem 1989, V54(3), P570 HCPLUS  
 (6) Claude; US 5510508 1996  
 (7) Dave, P; Syn Comm 1986, V16(11), P1343 HCPLUS  
 (8) Fujii, T; Chem and Pharm Bull 1978, V26(10), P3233 HCPLUS  
 (9) Ganem, B; Tetra Lett 1974, 11, P917 HCPLUS  
 (10) Kornblum, N; J Am Chem Soc 1957, V79(24), P6562  
 (11) Kornblum, N; J Am Chem Soc 1959, V81(15), P4113  
 (12) Mager, H; Tetrahedron 1974, V30, P917 HCPLUS  
 (13) Major, R; J Org Chem 1958, V23(10), P1563  
 (14) Nace, H; J Org Chem 1959, V24(11), P1792  
 (15) Nofre; US 5480668 1996  
 (16) Paritosh; Synthetic Commun 1986, V16(11), P1343  
 (17) Perrin & Perrin; Purification of Laboratory Chemicals 1986, P67  
 (18) Wiberg, K; J Am Chem Soc 1981, V103(13), P4473  
 (19) Wilson, N; J Org Chem 1996, V61(9), P2918

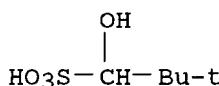
IT **44870-96-4P**

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(high-yield synthesis of 3,3-dimethylbutyraldehyde via the liq.-phase oxidn. of 1-chloro-3,3-dimethylbutane with inorg. bromides or iodides in DMSO)

RN 44870-96-4 HCPLUS

CN 1-Propanesulfonic acid, 1-hydroxy-2,2-dimethyl-, monosodium salt (9CI)  
 (CA INDEX NAME)



● Na

**Applicant**

L10 ANSWER 3 OF 5 HCPLUS COPYRIGHT 2000 ACS  
 AN 1999:238546 HCPLUS  
 DN 130:298301  
 TI Sulfinic acid derivatives and their use as reducing agents  
 IN Berghofer, Josef; Rothmann, Harry  
 PA L. Brueggemann K.-G., Germany  
 SO Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM C07C313-04  
 ICS C07B031-00; D06L003-10; D06P001-22; D06P005-15; C08F002-22  
 ICA C07C309-08; C07C309-17  
 CC 45-4 (Industrial Organic Chemicals,  
 Leather, Fats, and Waxes)  
 Section cross-reference(s): 35, 40, 43

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO.                                                                                  | DATE     |
|----|-------------|------|----------|--------------------------------------------------------------------------------------------------|----------|
| PI | DE 19743759 | A1   | 19990408 | DE 1997-19743759                                                                                 | 19971002 |
|    | WO 9918067  | A1   | 19990415 | WO 1998-EP4055                                                                                   | 19980701 |
|    |             |      |          | W: AU, BG, BR, CA, CN, CZ, EE, HR, HU, IL, JP, KR, LT, LV, NO, PL,<br>RO, RU, SG, SK, TR, UA, US |          |
|    |             |      |          | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,<br>PT, SE                    |          |
|    | AU 9885414  | A1   | 19990427 | AU 1998-85414                                                                                    | 19980701 |
|    | EP 956282   | A1   | 19991117 | EP 1998-936404                                                                                   | 19980701 |
|    |             |      |          | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE, MC, PT,                                   |          |

PRAI DE 1997-19743759 19971002  
 WO 1998-EP4055 19980701

OS MARPAT 130:298301

AB Sulfinic acids and their salts, R1R2R3CSO<sub>2</sub>M (M = H, ammonium, mono- or divalent metal ion; R1 = OH, optionally substituted amino; R2 = H, org. group; R3 = carboxy or sulfo deriv.) are useful as reducing agents which do not release HCHO. The sulfinic acids are obtained from aldehydes and Na dithionite and may be used in redox polymn. catalysts, in bleaching of kaolin, in textile printing and bleaching, and in deinking. In an example, Na hydrosulfite and glyoxylic acid gave 2-hydroxy-2-sulfinateoacetic acid di-Na salt in 95% yield.

ST sulfinic acid prodn aldehyde dithionite addn; formaldehyde free reducing agent sulfinate; bleaching agent redox polymn catalyst sulfinate

IT Bleaching agents

Reducing agents

(formaldehyde-free; prodn. of sulfinic acids and their salts for)

IT Kaolin, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (sulfinic acids and their salts as bleaching agents for)

IT Deinking

(sulfinic acids and their salts as formaldehyde-free bleaching agents for)

IT Pulp bleaching

Redox polymerization catalysts

Textile printing

(sulfinic acids and their salts as formaldehyde-free reducing agents in)

IT 4657-11-8P 33402-67-4P 223106-69-2P

RL: BYP (Byproduct); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (in reducing agent mixts. with sulfinic acid salts)

IT 4445-76-5 7757-83-7, Sodium sulfite 29736-24-1

223106-71-6

RL: TEM (Technical or engineered material use); USES (Uses)  
 (in reducing agent mixts. with sulfinic acid salts)

IT 223106-28-3P 223106-33-0P 223106-41-0P

223106-47-6P 223106-52-3P 223106-57-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prodn. of sulfinic acids and their salts as formaldehyde-free reducing agents)

IT 90-02-8, reactions 113-24-6, Sodium pyruvate 123-11-5,

4-Methoxybenzaldehyde, reactions 298-12-4, Glyoxylic acid 7446-09-5,

Sulfur dioxide, reactions 7775-14-6, Sodium hydrosulfite 7779-86-4,

Zinc dithionite

RL: RCT (Reactant)

(starting material; prodn. of sulfinic acids and their salts as formaldehyde-free reducing agents)

IT 24937-78-8P, EVA polymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(sulfinic acids and their salts as redox polymn. catalysts for prodn. of)

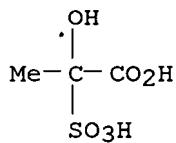
IT 4657-11-8P 33402-67-4P 223106-69-2P

RL: BYP (Byproduct); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(in reducing agent mixts. with sulfinic acid salts)

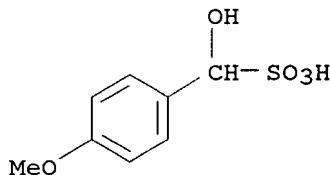
RN 4657-11-8 HCAPLUS

CN Propanoic acid, 2-hydroxy-2-sulfo-, disodium salt (9CI) (CA INDEX NAME)



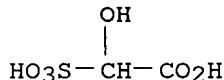
## ● 2 Na

RN 33402-67-4 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.-hydroxy-4-methoxy-, monosodium salt  
 (9CI) (CA INDEX NAME)



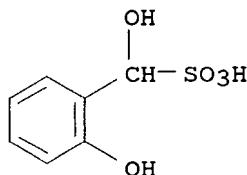
## ● Na

RN 223106-69-2 HCAPLUS  
 CN Acetic acid, hydroxysulfo-, zinc salt (1:1) (9CI) (CA INDEX NAME).



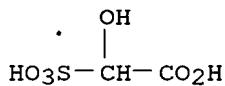
## ● Zn

IT 4445-76-5 29736-24-1 223106-71-6  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (in reducing agent mixts. with sulfinic acid salts)  
 RN 4445-76-5 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.,2-dihydroxy-, monosodium salt (9CI)  
 (CA INDEX NAME)



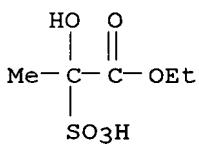
## ● Na

RN 29736-24-1 HCAPLUS  
 CN Acetic acid, hydroxysulfo-, disodium salt (9CI) (CA INDEX NAME)



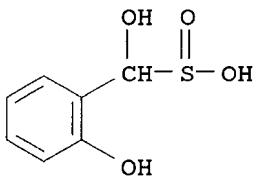
## ● 2 Na

RN 223106-71-6 HCAPLUS  
 CN Propanoic acid, 2-hydroxy-2-sulfo-, 1-ethyl ester, monosodium salt (9CI)  
 (CA INDEX NAME)



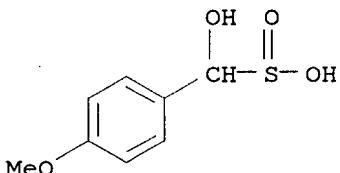
## ● Na

IT 223106-28-3P 223106-33-0P 223106-41-0P  
 223106-47-6P 223106-52-3P 223106-57-8P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (prodn. of sulfinic acids and their salts as formaldehyde-free reducing  
 agents)  
 RN 223106-28-3 HCAPLUS  
 CN Benzenemethanesulfinic acid, .alpha.,2-dihydroxy-, monosodium salt (9CI)  
 (CA INDEX NAME)



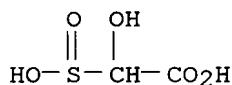
## ● Na

RN 223106-33-0 HCAPLUS  
 CN Benzenemethanesulfinic acid, .alpha.-hydroxy-4-methoxy-, monosodium salt  
 (9CI) (CA INDEX NAME)



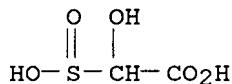
## ● Na

RN 223106-41-0 HCAPLUS **Best Available Copy**  
CN Acetic acid, hydroxysulfino-, disodium salt (9CI) (CA INDEX NAME)



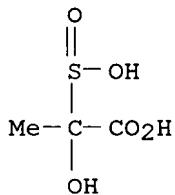
● 2 Na

RN 223106-47-6 HCAPLUS  
CN Acetic acid, hydroxysulfino-, zinc salt (1:1) (9CI) (CA INDEX NAME)



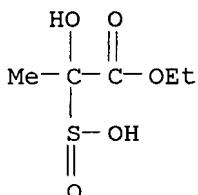
● Zn

RN 223106-52-3 HCAPLUS  
CN Propanoic acid, 2-hydroxy-2-sulfino-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 223106-57-8 HCAPLUS  
CN Propanoic acid, 2-hydroxy-2-sulfino-, 1-ethyl ester, monosodium salt (9CI)  
(CA INDEX NAME)



● Na

L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2000 ACS  
AN 1994:633459 HCAPLUS  
DN 121:233459  
TI Chrome and(or) vegetable tanning of grain hides for use in footwear  
IN Piwko, Czeslaw Z.

PA Instytut Barwnikow i Farbowniczych, Pol.  
SO Pol., 7 pp. Abstracted and indexed from the unexamined application.  
CODEN: POXXA7  
DT Patent  
LA Polish  
IC ICM C14C003-00  
ICS C14C001-00  
CC 45-2 (Industrial Organic Chemicals,  
Leather, Fats, and Waxes)  
FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | PL 161502  | B2   | 19930630 | PL 1989-283871  | 19891220 |
|    | PL 161502  | B1   | 19930630 |                 |          |

AB In the title processes amino arom. [i.e., contg. benzene and(or) naphthalene rings] and(or) C1-6 aliph. sulfonic acids optionally contg. CO<sub>2</sub>H, OH, Cl, NO<sub>2</sub>, NH<sub>4</sub>, and(or) C1-12 alkyl groups are used at any stage to replace pickling and eliminate the NaCl treatment. Thus, calf hide was unhaired and limed 22-24 h in a bath contg. 70% m-diaminobenzenesulfonic acid (I) 0.3-0.5, Ca(OH)<sub>2</sub> 1.5-2, Na<sub>2</sub>S 2-3, and enzyme tannage 0.2-0.4 at bath ratio 200%, pickled in a bath contg. 0.1-2% 70% I having pH 4.5-5.5, chrome tanned, dyed, and fat-liquored to give leather for footwear.  
ST amino sulfonic acid tanning grain hide; aminobenzenesulfonic acid tanning grain hide; footwear leather amino sulfonic acid tanning

IT Tanning  
(in presence of amino sulfonic acids, to eliminate sodium chloride treatment and replace pickling)

IT Footwear  
(tanning hides for, in presence of amino sulfonic acids)

IT Sulfonic acids, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(amino, tanning in presence of, to eliminate sodium chloride treatment and replace pickling)

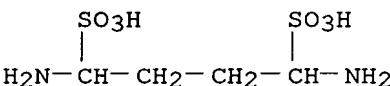
IT Phenolic resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(sulfo-contg., tanning in presence of, to eliminate sodium chloride treatment and replace pickling)

IT 50-00-0D, Formaldehyde, polymers with sulfonated phenol and arom. sulfonic acids 1333-39-7D, Phenolsulfonic acid, polymers with formaldehyde and arom. sulfonic acids 5857-94-3 101901-86-4 158518-94-6  
RL: USES (Uses)  
(tanning in presence of, to eliminate sodium chloride treatment and replace pickling)

IT 158518-94-6  
RL: USES (Uses)  
(tanning in presence of, to eliminate sodium chloride treatment and replace pickling)

RN 158518-94-6 HCAPLUS

CN 1,4-Butanedisulfonic acid, 1,4-diamino- (9CI) (CA INDEX NAME)



L10 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2000 ACS

AN 1993:541584 HCAPLUS

DN 119:141584

TI Process for fulling-tanning and/or retanning of leather with polyisocyanate polyaddition products

IN Traeubel, Harro; Dietrich, Manfred

PA Bayer A.-G., Germany

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA German

## Best Available Copy

IC ICM C14C003-18

ICS C14C003-28; C08G018-08

CC 45-2 (Industrial Organic Chemicals,  
Leather, Fats, and Waxes)

FAN.CNT 1

|    | PATENT NO.                | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------------------|------|----------|-----------------|----------|
| PI | EP 526815                 | A1   | 19930210 | EP 1992-112678  | 19920724 |
|    | EP 526815                 | B1   | 19941130 |                 |          |
|    | R: CH, DE, ES, GB, IT, LI |      |          |                 |          |
|    | DE 4125983                | A1   | 19930211 | DE 1991-4125983 | 19910806 |
|    | ES 2065116                | T3   | 19950201 | ES 1992-112678  | 19920724 |
|    | JP 05195000               | A2   | 19930803 | JP 1992-226547  | 19920804 |

PRAI DE 1991-4125983 19910806

AB Aq. dispersions of polyisocyanate polyaddn. products optionally contg. ionic, hydrazodicarbonamide, urea, and/or urethane groups are useful for fulling-tanning and/or retanning of leather, giving good fullness, dyeability, and softness with good bath exhaustion and minimal wastewater generation. Ethylene oxide-propylene oxide copolymer trimethylolpropane ether, hydrazine, H<sub>2</sub>NCH<sub>2</sub>CH(SO<sub>3</sub>Na)NH<sub>2</sub>, and TDI were used in the prepn. of a polyaddn. product dispersion for treating leather.

ST isocyanate polyol fulling tanning leather; polyurea polyol fulling tanning leather; polyurethane polyol fulling tanning leather; retanning leather isocyanate polyol

IT Urethane polymers, uses

RL: USES (Uses)  
(polyurea-, fulling-tanning and retanning materials, for leather)

IT Tanning materials

(re-, fulling and, polyisocyanate polyaddn. products as, for leather)

IT 26747-03-5P 149925-42-8P 149925-43-9P 149925-44-0P

149973-05-7P

RL: PREP (Preparation)

(prepn. and use for fulling-tanning and retanning of leather)

IT 149925-42-8P 149925-43-9P

RL: PREP (Preparation)

(prepn. and use for fulling-tanning and retanning of leather)

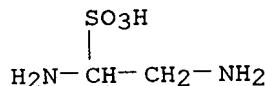
RN 149925-42-8 HCPLUS

CN Ethanesulfonic acid, 1,2-diamino-, monosodium salt, polymer with 1,3-diisocyanatomethylbenzene, hydrazine and methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 149925-41-7

CMF C2 H8 N2 O3 S . Na



● Na

CM 2

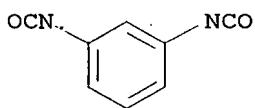
CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

CDES 8:ID

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D1-Me

CM 3

CRN 302-01-2  
CMF H4 N2

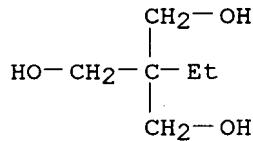
H2N-NH2

CM 4

CRN 52624-57-4  
CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x  
CDES 8:GD, ETHER

CM 5

CRN 77-99-6  
CMF C6 H14 O3

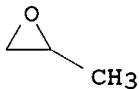


CM 6

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 7

CRN 75-56-9  
CMF C3 H6 O



CM 8

CRN 75-21-8  
CMF C2 H4 O



Best Available Copy

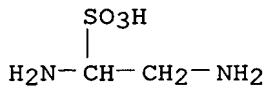
RN 149925-43-9 HCPLUS

CN Ethanesulfonic acid, 1,2-diamino-, monosodium salt, polymer with  
1,3-diisocyanatomethylbenzene, hydrazine, methyloxirane and oxirane (9CI)  
(CA INDEX NAME)

CM 1

CRN 149925-41-7

CMF C2 H8 N2 O3 S . Na



● Na

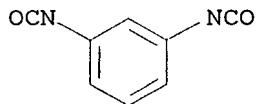
CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

CDES 8:ID



D1-Me

CM 3

CRN 302-01-2

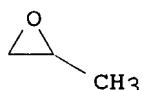
CMF H4 N2

H2N- NH2

CM 4

CRN 75-56-9

CMF C3 H6 O



CM 5

**Best Available Copy**

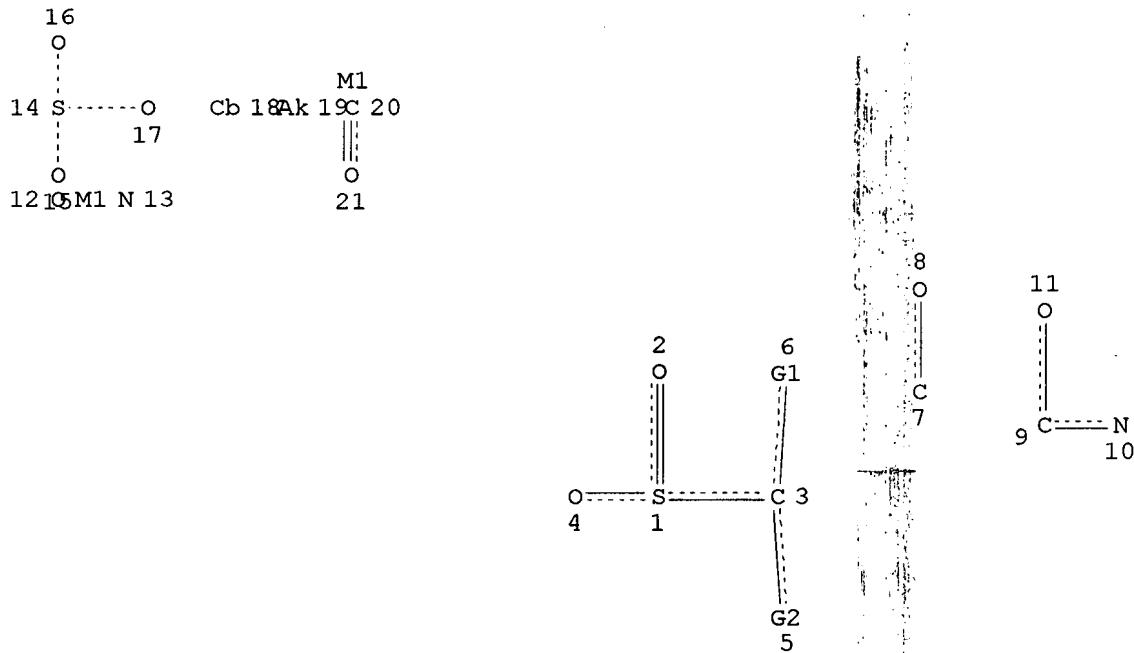
CRN 75-21-8  
CMF C2 H4 O

△  
O

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Hardee 09/319, 108

L5



VAR G1=12/13  
VAR G2=14/18/19/20/7/9

#### NODE ATTRIBUTES:

**NODE ATTRIBUTES:**

|        |    |    |    |    |
|--------|----|----|----|----|
| HCOUNT | IS | M1 | AT | 12 |
| HCOUNT | IS | M1 | AT | 20 |
| NSPEC  | IS | C  | AT | 1  |
| NSPEC  | IS | C  | AT | 2  |
| NSPEC  | IS | C  | AT | 3  |
| NSPEC  | IS | C  | AT | 4  |
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| NSPEC  | IS | C  | AT | 7  |
| NSPEC  | IS | C  | AT | 8  |
| NSPEC  | IS | C  | AT | 9  |
| NSPEC  | IS | C  | AT | 10 |
| NSPEC  | IS | C  | AT | 11 |

DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 1 2 3 4 7 8 9 10 11 12 13 14 15 16 17 18 19  
20 21

20 21

СВАРКА АЛЮМИНИЯ

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

STEREO ATTRIBUTES: NONE

|     |                                      |                                                                    |  |
|-----|--------------------------------------|--------------------------------------------------------------------|--|
| L7  | 1916 SEA FILE=REGISTRY SSS FUL L5    |                                                                    |  |
| L8  | 977 SEA FILE=HCAPLUS ABB=ON PLU=ON   | L7                                                                 |  |
| L9  | 73568 SEA FILE=HCAPLUS ABB=ON PLU=ON | (INDUSTRIAL ORGANIC CHEMICALS,<br>LEATHER, FATS, AND WAXES)/SC, SX |  |
| L10 | 5 SEA FILE=HCAPLUS ABB=ON PLU=ON     | L8 AND L9                                                          |  |
| L13 | 187 SEA FILE=HCAPLUS ABB=ON PLU=ON   | REDUC? AND L8                                                      |  |
| L14 | 20 SEA FILE=HCAPLUS ABB=ON PLU=ON    | (POLYMER? OR PLASTIC?) AND<br>L13                                  |  |
| L15 | 19 SEA FILE=HCAPLUS ABB=ON PLU=ON    | L14 NOT L10                                                        |  |

L15 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1999:819065 HCAPLUS  
 DN 132:50441  
 TI Process for removing residual volatile components from **polymer** dispersions  
 IN Dobbelaar, Johannes; Hbinger, Wolfgang; Keller, Peter; Stanger, Bernd  
 PA Basf A.-G., Germany  
 SO Eur. Pat. Appl., 7 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 IC ICM C08F006-00  
 CC 35-8 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 38, 43

FAN.CNT 1

|    | PATENT NO.                                                                                   | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|----------------------------------------------------------------------------------------------|------|----------|------------------|----------|
| PI | EP 967232                                                                                    | A1   | 19991229 | EP 1999-112059   | 19990622 |
|    | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |      |          |                  |          |
|    | DE 19828183                                                                                  | A1   | 19991230 | DE 1998-19828183 | 19980624 |

PRAI DE 1998-19828183 19980624

AB Residual volatile components are removed from **polymer** dispersions by treatment with an initiator, esp. a redox initiator system, for removal of residual monomers (chem. deodorization) and then treatment with an inert gas for removal of volatile constituents (phys. deodorization). The chem. deodorization is carried out as long as the decrease in residual monomer content is greater than the increase of secondary components introduced into the dispersion through the initiator. Thus, a Bu acrylate-acrylonitrile copolymer dispersion, produced by emulsion **polymer**, for adhesive applications and contg. 9800 ppm residual volatile components (800 ppm satd. non-**polymerizable** impurities and 9000 ppm residual monomers, mainly Bu acrylate), was chem. deodorized at 70.degree. using a tert-Bu hydroperoxide/acetone bisulfite initiator system. The treatment was continued until the monomer content fell to 900 ppm and the secondary components introduced by the redox initiator system was .apprx.500 ppm (60 min). The dispersion was then treated with steam to **reduce** the content of residual volatile components to 44 ppm.

ST acrylic **polymer** dispersion removal residual volatile; deodorization acrylic **polymer** dispersion; redox initiator chem deodorization **polymer** dispersion; phys deodorization **polymer** dispersion inert gas

IT Adhesives  
(acrylic **polymer** dispersion for; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)

IT Paper  
(coating, vinyl compd. **polymer**; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)

IT Deodorization  
Steam  
(removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)

IT Coating materials  
(vinyl compd. **polymer**, for paper; removing residual volatile components from **polymer** dispersions by chem. deodorization

using redox initiator systems and subsequent phys. deodorization with inert gas)

IT 7785-42-4, Acetone bisulfite  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with an inert gas)

IT 75-91-2, tert-Butyl hydroperoxide 79-25-4, Hydroxymethanesulfinic acid  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)

IT 25567-76-4, Acrylonitrile-butyl acrylate copolymer  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (dispersion, for adhesive applications; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)

IT 25838-20-4, Butadiene-butyl acrylate-styrene copolymer  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (dispersion, for paper coating; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with inert gas)

RE.CNT 4

RE

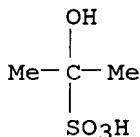
- (1) Basf Ag; DE 19621027 A 1997
- (2) Basf Ag; DE 19741189 A 1999
- (3) Isr Holding Sarl; EP 0003957 A 1979 HCPLUS
- (4) Nat Starch Chem Invest; EP 0650977 A 1995

IT 7785-42-4, Acetone bisulfite

RL: CAT (Catalyst use); USES (Uses)  
 (catalyst; removing residual volatile components from **polymer** dispersions by chem. deodorization using redox initiator systems and subsequent phys. deodorization with an inert gas)

RN 7785-42-4 HCPLUS

CN 2-Propanesulfonic acid, 2-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



L15 ANSWER 2 OF 19 HCPLUS COPYRIGHT 2000 ACS  
 AN 1999:243165 HCPLUS  
 DN 130:352896  
 TI Forces in foam films containing polyelectrolyte and surfactant  
 AU Klitzing, R. v.; Espert, A.; Asnacios, A.; Hellweg, T.; Colin, A.;  
 Langevin, D.  
 CS Centre de Recherche Paul Pascal (CNRS), Pessac, F-33600, Fr.  
 SO Colloids Surf., A (1999), 149(1-3), 131-140  
 CODEN: CPEAEH; ISSN: 0927-7757  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 CC 36-6 (Physical Properties of Synthetic High Polymers)  
 Section cross-reference(s): 66  
 AB Foam films of semi-dil. anionic polyelectrolyte solns. contg. addnl. the cationic surfactant dodecyltrimethylammonium bromide are investigated. The polyelectrolytes used are polystyrene sulfonate (PSS) and acrylamide-acrylamide sulfonate (AAS) copolymer as examples of strongly and weakly charged polyions, resp. The disjoining pressure isotherm results in film stratification well below the crit. micelle concn. (CMC) and the crit. aggregate concn. (CAC). These pressure oscillations are

related to a network **Best Available Copy** chains in the film bulk, and their period to the mesh size. The network can be described by the theory for semi-dil. polyelectrolyte solns., which is different for the two polyelectrolytes because of different charge densities along the chain. The surfactant has no observable influence on the network. To obtain information about the film interface surface tension measurements at the water-air interface are carried out. In comparison with the pure polyelectrolyte and the surfactant, resp., the surface tension is much **reduced** for the mixed systems as a result of the formation of complexes between the surfactant and the polyelectrolyte. The two **polymers** show different behavior in satn. of the surface coverage, which leads us to the conclusion that the complexes are different, although the behavior of the film bulk is not influenced by changes in the interface.

ST polyelectrolyte surfactant complexation foam film stratification

IT Cationic surfactants

Disjoining pressure

Foams

Plastic films

Polyelectrolytes

Surface tension

Viscosity

(forces in foam films contg. polyelectrolyte and surfactant)

IT **Polymer morphology**

(stratification; forces in foam films contg. polyelectrolyte and surfactant)

IT 1119-94-4, Dodecyltrimethylammonium bromide 9080-79-9, Polystyrene sulfonate sodium salt **112727-47-6**

RL: PEP (Physical, engineering or chemical process); PROC (Process) (forces in foam films contg. polyelectrolyte and surfactant)

RE.CNT 39

RE

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- (33) Perez, E; Thin Liquid Films 1988, P891 HCPLUS
- (34) Radlinska, E; Phys Rev Lett 1995, V74, P4237 HCPLUS

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 (37) Sedlak, M; J Chem Phys 1992, V96, P817 HCAPLUS  
 (38) Skolnick, J; Macromolecules 1977, V10, P944 HCAPLUS  
 (39) Sonin, A; Europhys Lett 1993, V22, P271 HCAPLUS

IT 112727-47-6

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (forces in foam films contg. polyelectrolyte and surfactant)

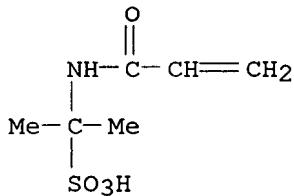
RN 112727-47-6 HCAPLUS

CN 2-Propanesulfonic acid, 2-[(1-oxo-2-propenyl)amino]-, polymer with  
 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 69418-27-5

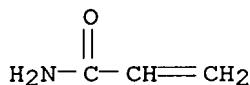
CMF C6 H11 N O4 S



CM 2

CRN 79-06-1

CMF C3 H5 N O



L15 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1998:603275 HCAPLUS

DN 129:231947

TI Composition and method for continuous dyeing with vat dyes

IN Krueger, Rudolf; Suetsch, Franz; Beckmann, Eberhard; Steidel, Volker

PA BASF A.-G., Germany

SO Ger. Offen., 4 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM D06P001-22

ICS D06M015-263; D06M015-09; D06P005-15; D06L003-10

ICA C09B007-02; C09B005-48; C09B049-00; D06L001-14

CC 40-6 (Textiles and Fibers)

FAN.CNT 1

|    | PATENT NO.                                                                                                                                                                                                        | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------|----------|
| PI | DE 19708972                                                                                                                                                                                                       | A1   | 19980910 | DE 1997-19708972 | 19970305 |
| AB | Fibers are continuously dyed with vat dyes in baths contg. .gtoreq.1 sizing agent (such as a polyacrylate) and .gtoreq.1 <b>reducing</b> agent (such as thiourea dioxide and .alpha.-hydroxyethanesulfinic acid). |      |          |                  |          |
| ST | vat dye fiber dyeing sizing agent; hydroxyethanesulfinic acid vat dye dyeing fiber; thiourea dioxide vat dye dyeing fiber; polyacrylate vat dye dyeing fiber; <b>reducing</b> agent fiber dyeing vat dye          |      |          |                  |          |
| IT | Dyeing<br><b>Reducing</b> agents<br>Sizes (agents)                                                                                                                                                                |      |          |                  |          |

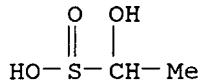
(compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

IT 1758-73-2, Thiourea dioxide **4378-66-9**  
 RL: RCT (Reactant)  
 (reducing agent; compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

IT 79-10-7D, Acrylic acid, esters, **polymers** 9004-32-4,  
 Carboxymethyl cellulose  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (sizing agent; compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

IT **4378-66-9**  
 RL: RCT (Reactant)  
 (reducing agent; compn. and method for continuous dyeing with vat dyes in presence of sizing agents)

RN 4378-66-9 HCPLUS  
 CN Ethanesulfinic acid, 1-hydroxy- (8CI, 9CI) (CA INDEX NAME)



L15 ANSWER 4 OF 19 HCPLUS COPYRIGHT 2000 ACS  
 AN 1998:425772 HCPLUS  
 DN 129:109349

TI Kinetics and **polymerization** characteristics for some polyvinyl acetate emulsions prepared by different redox pair initiation systems  
 AU Shaffei, K. A.; Ayoub, M. M. H.; Ismail, M. N.; Badran, A. S.  
 CS Chemistry Department, Faculty Science, Helwan University, Cairo, Egypt  
 SO Eur. Polym. J. (1998), 34(3-4), 553-556  
 CODEN: EUPJAG; ISSN: 0014-3057  
 PB Elsevier Science Ltd.  
 DT Journal  
 LA English  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 AB The emulsion **polymn.** of vinyl acetate was carried out using various NaHSO<sub>3</sub> adducts as **reducing** agents and K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> as oxidizing agent at low temp. The **polymn.** evaluation was followed by taking samples at regular intervals. The av. vol. diams., the areas and the no. of **polymer** particles per unit vol. of water for some prep'd. emulsion latices were calcd. with the aid of TEM and image analyzer techniques. The **polymn.** rate and emulsion particle size were detd. for each redox pair initiator.  
 ST vinyl acetate emulsion **polymn** redox initiator; kinetics vinyl acetate emulsion **polymn**  
 IT Emulsion **polymerization** catalysts  
 Emulsion **polymerization** kinetics  
 (kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)  
 IT Particle size  
**Polymer** morphology  
 (of poly(vinyl acetate) emulsions prep'd. using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)  
 IT **540-92-1 918-04-7**, Acetaldehyde-sodium bisulfite adduct  
**4657-12-9**, Benzaldehyde-sodium bisulfite adduct 7727-21-1,  
 Potassium persulfate 13489-81-1, Cyclohexanone-sodium bisulfite adduct  
**36609-96-8**, Octanaldehyde-sodium bisulfite adduct  
**55620-40-1**, Salicylaldehyde-sodium bisulfite adduct  
**92335-61-0**, Methyl propyl ketone-sodium bisulfite adduct  
 RL: CAT (Catalyst use); USES (Uses)  
 (kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)  
 IT 108-05-4, Vinyl acetate, reactions  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC

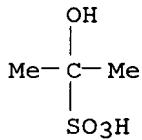
(Process) **Best Available Copy**  
 (kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)

IT 9003-20-7P, Poly(vinyl acetate)  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. by emulsion **polymn.** using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)

IT 540-92-1 918-04-7, Acetaldehyde-sodium bisulfite adduct  
 4657-12-9, Benzaldehyde-sodium bisulfite adduct 36609-96-8  
 , Octanaldehyde-sodium bisulfite adduct 55620-40-1,  
 Salicylaldehyde-sodium bisulfite adduct 92335-61-0, Methyl propyl ketone-sodium bisulfite adduct  
 RL: CAT (Catalyst use); USES (Uses)  
 (kinetics of emulsion **polymn.** of vinyl acetate using various carbonyl compd.-NaHSO<sub>3</sub> adduct/K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> redox initiators)

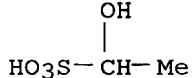
RN 540-92-1 HCPLUS

CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



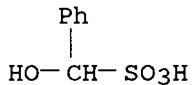
● Na

RN 918-04-7 HCPLUS  
 CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



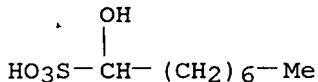
● Na

RN 4657-12-9 HCPLUS  
 CN Benzenemethanesulfonic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



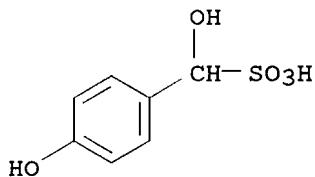
● Na

RN 36609-96-8 HCPLUS  
 CN 1-Octanesulfonic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



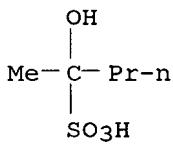
● Na

RN 55620-40-1 HCAPLUS  
 CN Benzenemethanesulfonic acid,  $\alpha$ ,4-dihydroxy-, monosodium salt (9CI)  
 (CA INDEX NAME)



● Na

RN 92335-61-0 HCAPLUS  
 CN 2-Pentanesulfonic acid, 2-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L15 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1997:683130 HCAPLUS  
 DN 127:319321  
 TI The course of emulsion **polymerization** of vinyl acetate using redox systems of different oxidizing agents  
 AU Shaffie, K. A.; Moustafa, A. B.; Mohamed, E. S.; Badran, A. S.  
 CS Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt  
 SO J. Polym. Sci., Part A: Polym. Chem. (1997), 35(15), 3141-3149  
 CODEN: JPACEC; ISSN: 0887-624X  
 PB Wiley  
 DT Journal  
 LA English  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 AB The emulsion **polymn.** of vinyl acetate was carried out using redox initiation systems contg. various persulfates; i.e., K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>, Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub>, and (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub>; each coupled with acetone sodium bisulfite adduct as **reducing** agent. The rate of **polymn.** was dependent on the initiator concn. to the powers 1.04, 1.02, and 0.34, resp. The effect of the various cations on the stability of the prepd. emulsion lattices was investigated using the sedimentation method. The effect of the cations on the morphol. characteristics of the lattices also was studied. The activation energies were detd.  
 ST vinyl acetate redox **polymn** kinetics; persulfate catalyst vinyl acetate **polymn**; emulsion redox **polymn** vinyl acetate

IT Redox polymerization ~~Best Available Copy~~  
 (emulsion; kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT Redox polymerization  
 (kinetics, emulsion; of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT Redox polymerization  
 (mechanism of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT Polymer morphology  
 (of poly(vinyl acetate) prep. using various persulfate/acetone bisulfite adduct catalysts)

IT Polymerization kinetics  
 (redox, emulsion; of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

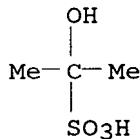
IT 540-92-1 7727-21-1, Potassium persulfate 7727-54-0, Ammonium persulfate 7775-27-1, Sodium persulfate  
 RL: CAT (Catalyst use); USES (Uses)  
 (kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT 108-05-4, Vinyl acetate, reactions  
 RL: RCT (Reactant)  
 (kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

IT 9003-20-7P, Poly(vinyl acetate)  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. using various persulfate/acetone bisulfite adduct catalysts)

IT 540-92-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (kinetics of emulsion redox **polymn.** of vinyl acetate using various persulfate/acetone bisulfite adduct catalysts)

RN 540-92-1 HCPLUS  
 CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



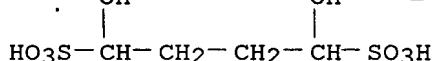
● Na

L15 ANSWER 6 OF 19 HCPLUS COPYRIGHT 2000 ACS  
 AN 1997:467690 HCPLUS  
 DN 127:95729  
 TI Redox catalysts for emulsion **polymerization**  
 IN Jakob, Martin  
 PA Hoechst A.-G., Germany  
 SO Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 IC ICM C08F004-40  
 ICS C09J157-00  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 67

FAN.CNT 1

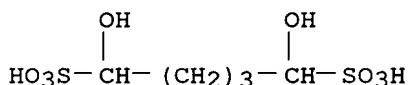
| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| EP 778290  | A2   | 19970611 | EP 1996-119133  | 19961129 |
| EP 778290  | A3   | 19970910 |                 |          |





●2 Na

RN 7420-89-5 HCPLUS  
 CN 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
 (CA INDEX NAME)



●2 Na

L15 ANSWER 7 OF 19 HCPLUS COPYRIGHT 2000 ACS  
 AN 1997:302978 HCPLUS  
 DN 126:278278  
 TI Low VOC emulsion of acrylic **polymers** and redox initiator system  
 for its manufacture  
 IN Sempio, Carlo; Saija, Leo Mario; Becchi, Daniele; Montessoro, Ezio  
 PA Elf Atochem Italia S.R.L., Italy  
 SO Eur. Pat. Appl., 17 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C08F006-00  
 CC 37-3 (Plastics Manufacture and Processing)  
 FAN.CNT 1

|      | PATENT NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|----------|
| PI   | EP 767180                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A1   | 19970409 | EP 1996-115707  | 19961001 |
|      | EP 767180                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | B1   | 19990602 |                 |          |
|      | R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, NL, PT, SE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |          |                 |          |
|      | AT 180792                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | E    | 19990615 | AT 1996-115707  | 19961001 |
|      | ES 2134548                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | T3   | 19991001 | ES 1996-115707  | 19961001 |
|      | US 5721310                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A    | 19980224 | US 1996-724869  | 19961003 |
| PRAI | IT 1995-MI2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 19951004 |                 |          |
| AB   | A dispersion or emulsion of acrylic <b>polymer</b> with total VOC<br>.1toreq.600 ppm and residual monomer .1toreq.100 ppm is manufd. by using a<br>redox couple as monomer <b>redn.</b> phase which is composed of<br>ascorbic acid or a water-sol. (.gtoreq.5%), C.gtoreq.4 aldehyde having<br>salifiable hydrogen or its salt as the <b>redn.</b> agent and a<br>hydroperoxide or its salt as the oxidn. agent. Thus, an emulsion of<br>styrene 53, Bu acrylate 45 and acrylic acid 2% was <b>polymd.</b> with<br>potassium persulfate initiator as monomer <b>redn.</b> phase A and then<br>a diisopropylbenzenedihydroperoxide sodium salt/glutaraldehyde hydrogen<br>sodium sulfite redox as <b>redn.</b> phase B to give a product showing<br>dry residue 50%, wet coagulum (.mu. 125 filter) 450, residual monomer 80<br>and VOC 500 ppm. |      |          |                 |          |
| ST   | VOC low acrylic emulsion redox initiator; diisopropylbenzenedihydroperoxid<br>e glutaraldehyde salt <b>redn</b> acrylic VOC; monomer residual<br><b>redn</b> redox initiator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |          |                 |          |
| IT   | Redox <b>polymerization</b> catalysts<br>(emulsion; low VOC emulsion of acrylic <b>polymers</b> and the redox<br>initiator system for its manuf.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |          |                 |          |
| IT   | Acrylic <b>polymers</b> , preparation<br>RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |          |                 |          |

(low VOC emulsion **Best Available Polymers** and redox initiator system for its manuf.)

IT Emulsion **polymerization** catalysts  
(redox; low VOC emulsion of acrylic **polymers** and the redox initiator system for its manuf.)

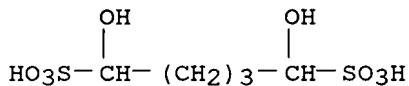
IT 50-81-7, Ascorbic acid, uses **7420-89-5**, Glutaraldehyde bisulfite  
7727-21-1, Potassium persulfate 28959-35-5 29014-32-2,  
Diisopropylbenzenedihydroperoxide 29880-89-5 29880-90-8,  
p-Diisopropylbenzene dihydroperoxide, disodium salt  
RL: CAT (Catalyst use); USES (Uses)  
(initiator; low VOC emulsion of acrylic **polymers** and redox initiator system for its manuf.)

IT 25586-20-3P, Acrylic acid-butyl acrylate-styrene copolymer  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(low VOC emulsion of acrylic **polymers** and redox initiator system for its manuf.)

IT **7420-89-5**, Glutaraldehyde bisulfite  
RL: CAT (Catalyst use); USES (Uses)  
(initiator; low VOC emulsion of acrylic **polymers** and redox initiator system for its manuf.)

RN 7420-89-5 HCPLUS

CN 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



●2 Na

L15 ANSWER 8 OF 19 HCPLUS COPYRIGHT 2000 ACS  
AN 1991:682181 HCPLUS  
DN 115:282181  
TI Thermosetting **polymer** food containers and their manufacture  
IN Niwa, Morihiko; Nakado, Yozo; Kawamura, Midori  
PA Meisei K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM A47G019-00  
ICS B05D007-00  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 38  
FAN.CNT 1

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------|------|----------|-----------------|----------|
| JP 03085108 | A2   | 19910410 | JP 1989-222329  | 19890829 |
| JP 2733551  | B2   | 19980330 |                 |          |

AB The food containers with good scratch and soil resistance are prep'd. by contacting thermosetting **polymer** (e.g., melamine resin) containers with HCHO-absorbent-contg. fluoropolymer dispersions. Thus, soaking a melamine resin bowl in an aq. dispersion contg. PTFE and 1:2 glyoxal-NaHSO<sub>3</sub> adduct at 40-45.degree. and 300 torr for 5 min, increasing the pressure to 1 atm, **reducing** to 300 torr for 5 min, washing with warm H<sub>2</sub>O, and drying at room temp. -40.degree. gave a containers showing no residual HCHO and good antisoiling.

ST antisoiling fluoro coating food container; glyoxal bisulfite adduct formaldehyde catch; melamine resin container fluoro coating

IT Coating materials  
(antisoiling, aq. fluoropolymer dispersions, contg. formaldehyde absorbents, for melamine resin food containers)

IT 9002-84-0, PTFE      **Best Available Copy**

RL: USES (Uses)

(aq. coatings, contg. formaldehyde absorbents, for melamine resin food containers)

IT 9003-08-1, Formaldehyde-melamine copolymer

RL: USES (Uses)

(food containers, antisoiling coatings for, fluoropolymer dispersions contg. formaldehyde absorbents)

IT 57-13-6, Urea, uses and miscellaneous 105-45-3, Methyl acetoacetate

123-54-6, Acetylacetone, uses and miscellaneous 517-21-5

52143-74-5 70800-52-1 136541-55-4

RL: USES (Uses)

(formaldehyde absorbents, aq. fluoropolymer dispersions contg., as antisoiling coatings, for melamine resin food containers)

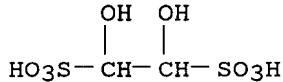
IT 517-21-5 70800-52-1

RL: USES (Uses)

(formaldehyde absorbents, aq. fluoropolymer dispersions contg., as antisoiling coatings, for melamine resin food containers)

RN 517-21-5 HCAPLUS

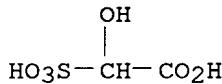
CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



●2 Na

RN 70800-52-1 HCAPLUS

CN Acetic acid, hydroxysulfo-, sodium salt (9CI) (CA INDEX NAME)



●x Na

L15 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1991:594222 HCAPLUS

DN 115:194222

TI Developers for positive-working photoresists

IN Kawabe, Yasumasa; Akiyama, Keiji

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-32

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 03087838 | A2   | 19910412 | JP 1989-224929  | 19890831 |
|    | JP 2589823  | B2   | 19970312 |                 |          |

AB The title developers based on basic component contain alkali-sol. resins chosen from novolaks, acetone-pyrogallol resin, and polymer of

hydroxystyrene and ~~i~~ Best Available Copy ~~rg.~~ reducing agents. Typical basic components are Me4NOH and Me3HOCH<sub>2</sub>CH<sub>2</sub>NOH, and the reducing agents are hydrazines, hydrazides, carbazates, semicarbazides, guanidines, hydroxamic acids, hydroxyurea, and glucose. These developers do not produce surface peeling or scums and provide high retention of resist thickness, are highly wetting and permeable to resists, nonfoaming, and storage-stable. Thus, a Si wafer with a resist layer contg. 5 parts m-cresol-p-cresol novolak and 1.25 parts 1,2-naphthoquinonediazide-5-sulfonate ester of 2,3,4,4'-tetrahydroxybenzophenone was patternwise exposed and developed in a soln. contg. Me4NOH 2.38, methylhydrazine 0.2, and m-cresol- p-cresol novolak 0.2 wt.%, with described advantages.

ST developer pos working photoresist additive

IT Phenolic resins, uses and miscellaneous

RL: USES (Uses)

(developers for pos.-working photoresists contg. reducing agents and)

IT Resists

(photo-, pos.-working, developers for, alkali-sol. resins and reducing agents as additives to)

IT 50-99-7, D-Glucose, uses and miscellaneous 57-14-7 60-34-4 79-17-4, Hydrazinecarboximidamide 89-73-6 109-84-2 127-07-1 497-18-7, Carbonic dihydrazide 546-88-3 637-33-2 996-98-5 1068-57-1 4364-78-7, Carbonimidic dihydrazide 14628-35-4 17696-95-6 19247-05-3 40685-92-5 136610-34-9 **136610-35-0**

RL: USES (Uses)

(developer for pos.-working photoresists contg. alkali-sol. resins and)

IT 75-59-2, Tetramethylammonium hydroxide 123-41-1, Trimethyl(2-hydroxyethyl)ammonium hydroxide

RL: USES (Uses)

(developers for pos.-working photoresists contg. additives and)

IT 24979-70-2, Poly(p-hydroxystyrene) 25053-96-7 25086-36-6 26983-56-2 27029-76-1 35464-74-5 38333-84-5 112504-03-7, m-Cresol-p-cresol-formaldehyde-3,5-xylenol copolymer

RL: USES (Uses)

(developers for pos.-working photoresists contg. reducing agents and)

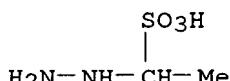
IT **136610-35-0**

RL: USES (Uses)

(developer for pos.-working photoresists contg. alkali-sol. resins and)

RN 136610-35-0 HCAPLUS

CN Ethanesulfonic acid, 1-hydrazino- (9CI) (CA INDEX NAME)



L15 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1986:581590 HCAPLUS

DN 105:181590

TI Image forming method

IN Hayakawa, Yoshihide; Satomura, Masato; Sato, Kozo

PA Fuji Photo Film Co., Ltd. , Japan

SO Eur. Pat. Appl., 51 pp.

CODEN: EPXXDW

DT Patent

LA English

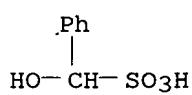
IC ICM G03C001-68

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | EP 174634  | A2   | 19860319 | EP 1985-111416  | 19850910 |

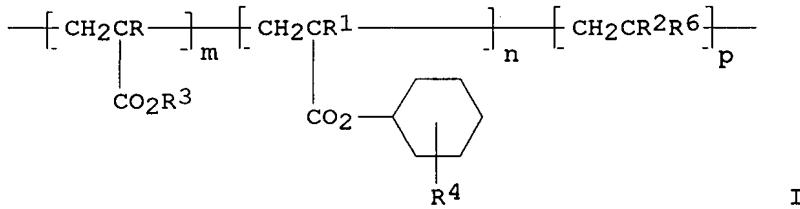
EP 174634 A3 Best Available Copy  
 EP 174634 B1 19871209  
 R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE  
 JP 61069062 A2 19860409 JP 1984-191353 19840912  
 JP 03012307 B4 19910219  
 JP 61073145 A2 19860415 JP 1984-195407 19840918  
 JP 03012308 B4 19910219  
 AT 31368 E 19871215 AT 1985-111416 19850910  
 US 4629676 A 19861216 US 1985-775273 19850912  
 PRAI JP 1984-191353 19840912  
 JP 1984-195407 19840918  
 EP 1985-111416 19850910  
 AB An image-forming method is comprised of imagewise exposing a photosensitive compn. contg. a photosensitive Ag salt, a **reducing** agent, a **polymerizable** compd., and a binder and uniformly heating at .gt;req.80.degree. to form a **polymer** layer in the exposed area. Thus, a PET film support was coated with a dispersion consisting of poly(vinylpyrrolidone) 3, acrylamide 2, methylenebisacrylamide 0.25, Ag behenate (prepd. from behenic acid 2 and AgNO<sub>3</sub> 1 mol) 1.44 g, and MeOH 20 mL, dried, overcoated with a soln. consisting of m-dimethylaminophenol 137, NH<sub>4</sub>Br 2.5, NH<sub>4</sub>I 0.2 mg, and MeOH 5 mL, dried, overcoated with a soln. consisting of a 4% gelatin soln. 100, a 1% Na laurylbenzenesulfonate 1, and a HCHO-NaHSO<sub>3</sub> adduct 0.001 g, dried, exposed to a fluorescence lamp (60 W) at a distance of 1 m for 2 s, heated at 85-90.degree. for 30 s, and washed by MeOH to obtain a strong **polymer** film in the exposed area.  
 ST photothermog film silver salt monomer; **reductant** monomer silver salt photothermog  
 IT Photothermography  
 (heat-developable photosensitive compns. contg. photosensitive silver salt and **reducing** agent and **polymerizable** monomer for)  
 IT Photoimaging compositions and processes  
 (photopolymerizable, heat-developable, contg. photosensitive silver salt and **reducing** agent and **polymerizable** compd.)  
 IT 99-07-0 120-80-9, uses and miscellaneous 2475-44-7 4657-12-9  
 6342-17-2 13489-81-1 22091-92-5 25820-85-3  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver salt and **polymerizable** compd. and, for photothermog. and photoimaging process)  
 IT 92-43-3 110-26-9 870-72-4 1552-42-7 2274-13-7 28805-80-3  
 36886-76-7 51178-86-0 102840-31-3  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver salt and **reducing** agent and **polymerizable** monomer and, for photothermog. and photoimaging process)  
 IT 79-06-1, uses and miscellaneous 109-17-1 4986-89-4  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver salt and **reducing** agent and, for photothermog. and photoimaging process)  
 IT 2489-05-6 22257-44-9  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. **reducing** agent and **polymerizable** monomer and, for photothermog. and photoimaging compns.)  
 IT 4657-12-9  
 RL: USES (Uses)  
 (heat-developable photosensitive compns. contg. photosensitive silver salt and **polymerizable** compd. and, for photothermog. and photoimaging process)  
 RN 4657-12-9 HCAPLUS  
 CN Benzenemethanesulfonic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



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• Na

L15 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
AN 1985:157932 HCAPLUS  
DN 102:157932  
TI Silver halide photographic material  
PA Konishiroku Photo Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03C001-04  
      ICS C08L033-04  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
      Reprographic Processes)  
FAN.CNT 1  
PATENT NO.    KIND    DATE                   APPLICATION NO.    DATE  
-----  -----  -----  -----  -----  
PI  JP 59224839    A2    19841217    JP 1983-138752    19830729  
GI



二

AB Ag halide photog. photosensitive materials contain latexes of a polymer of the general formula I ( $m + n + p = 100$  wt.%; 10 .ltoreq. n .ltoreq. 70 wt.%, p .ltoreq. 15 wt.%; R, R<sub>1</sub>, R<sub>2</sub> = H, Me, Et, OH, HOCH<sub>2</sub>, HOC<sub>2</sub>H<sub>4</sub>, HO<sub>2</sub>CCH<sub>2</sub> HO<sub>2</sub>CC<sub>2</sub>H<sub>4</sub>; R<sub>3</sub> = Cl-4 alkyl; R<sub>4</sub> = H, OH, halo, Cl-6 alkyl; R<sub>5</sub> = H, monovalent group) in .gtoreq.1 of the hydrophilic colloid layers. The addn. of the latex not only improves the adhesion of the layer with support but also improves redn. characteristics of the photog. materials. Thus, acrylic acid-cyclohexyl acrylate-Et acrylate copolymer latex was added to a Ag(Br, I) emulsion. The photog. emulsion showed good stability, and photog. film prep'd. by using the emulsion showed good adhesion to the layers and good redn. rate. The addn. of the latex did not degrade the photog. characteristics of the emulsion.

ST cyclohexyl acrylate copolymer photog; gelatin substitute photog  
IT Photographic emulsions

(gelatin substitute, cyclohexyl acrylate deriv. copolymers as)

IT 61644-58-4 95972-30-8 95972-32-0 95972-33-1 95972-34-2

95972-35-3 95972-38-6 95972-39-7 95972-40-0

(silver halide photog. emulsion contg. latex of, for improved adhesion and **redn.** characteristics)

IT 95972-30-8

(silver halide photog. emulsion contg. latex of, for improved adhesion and **redn.** characteristics)

RN 95972-30-8 HCAPLUS

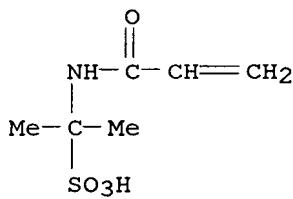
CN 2-Propenoic acid, ethyl ester, polymer with 4-methylcyclohexyl  
2-propenoate and 2-[(1-oxo-2-propenyl)amino]-2-propanesulfonic acid  
monosodium salt (9CI) (CA INDEX NAME)

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CM 1

CRN 63149-48-4

CMF C6 H11 N O4 S . Na

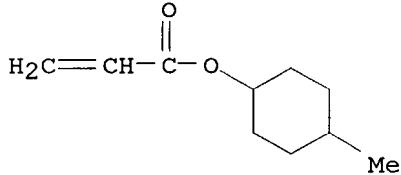


● Na

CM 2

CRN 16491-65-9

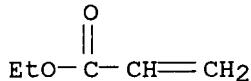
CMF C10 H16 O2



CM 3

CRN 140-88-5

CMF C5 H8 O2



L15 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
AN 1985:106310 HCAPLUS  
DN 102:106310  
TI Nephrotoxicity inhibitors for aminoglycoside antibiotics  
IN Williams, Patricia D.; Hottendorf, Girard H.  
PA Bristol-Myers Co. , USA  
SO Brit. UK Pat. Appl., 14 pp.  
CODEN: BAXXDU  
DT Patent  
LA English  
IC A61K037-00; A61K031-71; A61K035-74; A61K045-06  
CC 1-5 (Pharmacology)  
FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | GB 2139087 | A1   | 19841107 | GB 1984-10804   | 19840427 |
|    | GB 2139087 | B2   | 19870325 |                 |          |
|    | US 4526888 | A    | 19850702 | US 1983-489999  | 19830429 |

|             |                       |                 |          |
|-------------|-----------------------|-----------------|----------|
| NL 8401322  | A Best Available Copy | NL 1984-1322    | 19840425 |
| ZA 8403075  | A 19841224            | ZA 1984-3075    | 19840425 |
| JP 59206311 | A2 19841122           | JP 1984-83039   | 19840426 |
| JP 05053776 | B4 19930810           |                 |          |
| BE 899542   | A1 19841029           | BE 1984-212851  | 19840427 |
| SE 8402333  | A 19841030            | SE 1984-2333    | 19840427 |
| SE 466288   | B 19920127            |                 |          |
| SE 466288   | C 19920527            |                 |          |
| AU 8427442  | A1 19841101           | AU 1984-27442   | 19840427 |
| AU 560158   | B2 19870402           |                 |          |
| FR 2544986  | A1 19841102           | FR 1984-6741    | 19840427 |
| FR 2544986  | B1 19870619           |                 |          |
| DE 3415805  | A1 19850228           | DE 1984-3415805 | 19840427 |
| CH 660457   | A 19870430            | CH 1984-2088    | 19840427 |
| CA 1227135  | A1 19870922           | CA 1984-452933  | 19840427 |

PRAI US 1983-489999 19830429

AB **Polymers** of asparagine, e.g. poly-L-asparagine (PAsp) [28088-48-4] and of aspartic acid, e.g. poly-L-aspartic acid (PAA) [25608-40-6] or their copolymer [95144-25-5] when administered cojointly with an aminoglycoside antibiotic, **reduced** the nephrotoxicity of the antibiotic apparently by inhibiting the renal uptake or binding of the aminoglycoside. Thus, the gentamicin-PAsp mixt. [95148-96-2] or the amikacin-PAA mixt. [95149-05-6] had decreased nephrotoxicity when compared to that obsd. in rats treated with gentamicin [1403-66-3] or amikacin [37517-28-5], resp.

ST aminoglycoside antibiotic nephrotoxicity transport inhibitor; amino acid **polymer** antibiotic nephrotoxicity

IT Ferritins

(aminoglycoside antibiotic membrane transport response to, nephrotoxicity in relation to)

IT Kidney, toxic chemical and physical damage

(aminoglycoside antibiotic toxicity to, amino acid **polymers** effect on)

IT Antibiotics

(aminoglycoside, nephrotoxicity of, amino acid **polymers** effect on)

IT Polyamides, biological studies

(poly(amino acids), nephrotoxicity of aminoglycoside antibiotics response to)

IT 71-44-3 75-92-3 997-20-6 **7420-89-5** 21743-35-1 24937-47-1

24937-49-3 24991-23-9 25104-12-5 25104-18-1 25212-18-4

25513-46-6 25608-40-6 26062-48-6 26063-13-8 26854-81-9

26894-34-8 28088-48-4 36787-86-7 38000-06-5

(aminoglycoside antibiotic membrane transport response to, nephrotoxicity in relation to)

IT 95148-96-2 95148-97-3 95148-98-4 95148-99-5 95149-00-1

95149-01-2 95149-02-3 95149-03-4 95149-04-5 95149-05-6

(nephrotoxicity of)

IT 95144-25-5

(nephrotoxicity of aminoglycoside antibiotics in relation to)

IT 1403-66-3 37517-28-5

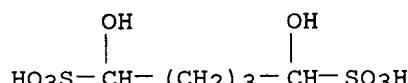
(nephrotoxicity of, amino acid **polymers** effect on)

IT **7420-89-5**

(aminoglycoside antibiotic membrane transport response to, nephrotoxicity in relation to)

RN 7420-89-5 HCAPLUS

CN 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)





●2 Na

L15 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1983:54705 HCAPLUS

DN 98:54705

TI Ketone bisulfites as **reducing** agent for free radical  
**polymerization**

IN Pinschmidt, Robert K., Jr.; Marten, Finn L.

PA Air Products and Chemicals, Inc., USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

IC C08L023-02

NCL 524819000

CC 35-5 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------|------|----------|-----------------|----------|
| PI | US 4360632  | A    | 19821123 | US 1981-314318  | 19811023 |
|    | FR 2515189  | A1   | 19830429 | FR 1982-17716   | 19821022 |
|    | FR 2515189  | B1   | 19860829 |                 |          |
|    | JP 58080302 | A2   | 19830514 | JP 1982-184789  | 19821022 |
|    | JP 61054321 | B4   | 19861121 |                 |          |
|    | GB 2108980  | A1   | 19830525 | GB 1982-30207   | 19821022 |
|    | GB 2108980  | B2   | 19850501 |                 |          |
|    | DE 3239212  | A1   | 19830526 | DE 1982-3239212 | 19821022 |
|    | DE 3239212  | C2   | 19840301 |                 |          |

PRAI US 1981-314318 19811023

AB Latexes are prep'd. by **polymg.** vinyl compds. in the presence of stabilizers, oxidants, and H<sub>2</sub>O-sol. bisulfite adducts of C3-8 ketones as **reducing** agents. Thus, adding 1854 g acrylic acid in 2.78 kg H<sub>2</sub>O over 2 h, 154 g 70% tert-BuOOH in 3.45 kg H<sub>2</sub>O at 3.7 mL/min, and Me<sub>2</sub>C(OH)SO<sub>3</sub>Na (I) [540-92-1] (from 158 g acetone) in 6045 g H<sub>2</sub>O at 1350 mL/h to vinyl acetate 21,600, nonylphenol ethoxylate phosphate 810, FeSO<sub>4</sub>.7H<sub>2</sub>O 2, and H<sub>2</sub>O 19,000 g stirred at pH 4.2 and 46-50.degree. with I (from 5.5 g acetone) and C<sub>2</sub>H<sub>4</sub> at 500 psi for 4 h gave a copolymer [26713-18-8] (glass temp. -7.degree.) latex contg. 3.4 ppm free HCHO, compared with 78 ppm with (HOCH<sub>2</sub>SO<sub>2</sub>)<sub>2</sub>Zn in place of I.

ST catalyst **polymn** redox; bisulfite ketone catalyst **polymn**; acetone bisulfite catalyst **polymn**; sulfonate hydroxyalkane catalyst **polymn**; vinyl acetate **polymn** redox; ethylene **polymn** redox catalyst

IT Ketones, compounds

(bisulfites, catalysts, for emulsion **polymn**.)

IT **Polymerization** catalysts  
 (redox, ketone bisulfite-oxidants, for emulsion **polymn**.)

IT 540-92-1 13489-81-1 30723-93-4 84371-02-8  
 84371-03-9 84371-04-0

RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for emulsion **polymn**.)

IT 24937-78-8P 26713-18-8P  
 (emulsions, manuf. of, catalysts for)

IT 540-92-1 30723-93-4 84371-02-8  
 84371-03-9 84371-04-0

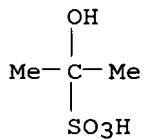
RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for emulsion **polymn**.)

RN 540-92-1 HCAPLUS

CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt. (8CI, 9CI) (CA INDEX)

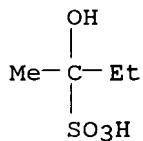
NAME)

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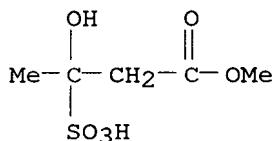
● Na

RN 30723-93-4 HCAPLUS  
CN 2-Butanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX  
NAME)



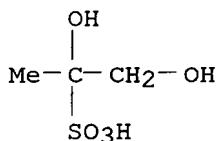
● Na

RN 84371-02-8 HCAPLUS  
CN Butanoic acid, 3-hydroxy-3-sulfo-, 1-methyl ester, monosodium salt (9CI)  
(CA INDEX NAME)



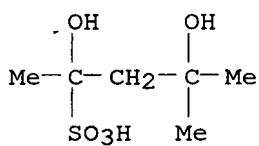
● Na

RN 84371-03-9 HCAPLUS  
CN 2-Propanesulfonic acid, 1,2-dihydroxy-, monosodium salt (9CI) (CA INDEX  
NAME)



● Na

RN 84371-04-0 HCAPLUS  
CN 2-Pentanesulfonic acid, 2,4-dihydroxy-4-methyl-, monosodium salt (9CI)  
(CA INDEX NAME)



● Na

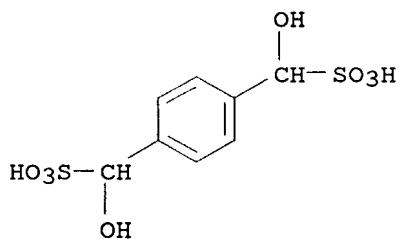
L15 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1982:69528 HCAPLUS  
 DN 96:69528  
 TI Basic studies on the synthesis of nonflammable and electroconductive macromolecules  
 AU Lee, Woo Young; Chang, Sae Hee  
 CS Coll. Nat. Sci., Seoul Natl. Univ., Seoul, S. Korea  
 SO Chayon Kwahak Taehak Nomunjip (Soul Taehakkyo) (1980), 5(1), 57-67  
 CODEN: CKTNDR  
 DT Journal  
 LA English  
 CC 35-5 (Chemistry of Synthetic High Polymers)  
 AB **Polymers** with high N content, e.g. polyhydrazones and polyhydrazides, were synthesized by condensing hydrazine, phenylenedihydrazines, or dihydrazides with dialdehydes, diketones, diacyl chlorides, or acid anhydrides. The products were characterized by IR spectra and elemental anal.  
 ST nitrogen contg nonflammable **polymer**; electrocond nitrogen contg **polymer**; polyhydrazone synthesis; polyhydrazide synthesis; hydrazine dicarbonyl compd polycondensation; dihydrazide dicarbonyl compd polycondensation; phenylenedihydrazine dicarbonyl compd polycondensation; dicarbonyl compd hydrazine polycondensation  
 IT Hydrazones  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (polymeric, prepn. of)  
 IT Polyhydrazides  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (arom., prepn. of)  
 IT **Polymerization**  
 (condensation, of hydrazine derivs. with dicarbonyl compds.)  
 IT Aldehydes, **polymers**  
 (di-, **polymers** with phenylenedihydrazine)  
 IT 79702-21-9P 79715-90-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and hydrolysis of)  
 IT 27044-31-1P 29695-95-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and thermal cyclization of)  
 IT 16906-23-3P 79702-16-2P 79702-17-3P 79702-18-4P 79702-19-5P  
 79702-20-8P 79715-82-5P 79715-83-6P 79715-84-7P 79715-85-8P  
 79715-86-9P **79715-89-2P** 79715-91-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 IT 106-50-3, reactions  
 RL: RCT (Reactant)  
 (redn. of tetrazotized, by stannous chloride)  
 IT **79715-89-2P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 79715-89-2 HCAPLUS  
 CN 1,4-Benzenedimethanesulfonic acid, .alpha.,.alpha.-dihydroxy-, disodium salt, polymer with 1,1'-(1,4-phenylene)bis[hydrazine] dihydrochloride (9CI) (CA INDEX NAME)

CM 1

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CRN 30133-29-0

CMF C8 H10 O8 S2 . 2 Na

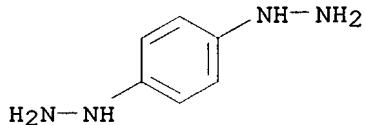


●2 Na

CM 2

CRN 16906-23-3

CMF C6 H10 N4 . 2 Cl H



●2 HCl

L15 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1980:50073 HCAPLUS

DN 92:50073

TI Adhesive coatings for film supports

IN Nagasawa, Kotaro; Sato, Tsutomu

PA Somar Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08J007-04; C09J005-02

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
Section cross-reference(s): 42

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 54094575 | A2   | 19790726 | JP 1978-1238    | 19780110 |
|    | JP 60059254 | B4   | 19851224 |                 |          |

AB Film supports are coated with a vinylidene chloride (co)polymer-based adhesive compn. contg. RSO<sub>3</sub>H (R= aryl, alkyl, cycloalkyl, aralkyl, or heterocyclic moiety; R may be substituted with SO<sub>3</sub>H-group contg. substituent). The film supports are useful for diazo copying materials, photosensitive resin films, photog. films, as well as laminated wrapping sheets. The use of the sulfonic acid derivs. reduces the corrosion of various app. during coating or combustion of waste films. Thus, a poly(ethylene terephthalate) film was coated with a compn. contg. acrylonitrile-vinylidene chloride (1:9.76 mol ratio) copolymer 2.0, p-phenolsulfonic acid 0.25, MeCOEt 48.5, xylene 28.0, and cellosolve 41.5

parts to give a film ~~Best Available Copy~~ support was then coated with a diazo photosensitive compn. to give a diazo photog. film. Good adhesion with the support was attained.

ST film support adhesive coating; diazo copying film support

IT Diazo process

Printing plates  
(photosensitive sheets for, adhesive coatings for film supports for)

IT Photographic films  
(supports, adhesive compn. contg. vinylidene chloride **polymer** and sulfonic acid derivs. for)

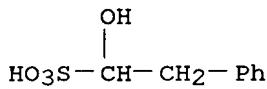
IT 98-67-9 120-18-3 585-42-2 1782-10-1 4681-78-1 9010-76-8  
53393-71-8 72452-31-4

RL: USES (Uses)  
(adhesive compn. contg., for photog. film supports)

IT 53393-71-8  
RL: USES (Uses)  
(adhesive compn. contg., for photog. film supports)

RN 53393-71-8 HCAPLUS

CN Benzeneethanesulfonic acid, .alpha.-hydroxy- (9CI) (CA INDEX NAME)



L15 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
AN 1976:111483 HCAPLUS  
DN 84:111483

TI Reverse osmosis process using crosslinked aromatic polyamide membranes  
IN McKinney, Ray, Jr.; Hofferbert, William L.  
PA United States Dept. of the Interior, USA  
SO U. S. Pat. Appl., 15 pp. Avail. NTIS.  
CODEN: XAXXAV

DT Patent  
LA English  
CC 61-5 (Water)  
Section cross-reference(s): 37

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | US 616441  |      | 19670213 | US 1967-616441  | 19670213 |

AB Reverse osmosis membranes with improved flux stability are prep'd. by crosslinking arom. polyamide membranes. The crosslinking is done by using reagents such as aldehydes, polyamines, polycarboxylic acids, polyisocyanates, oxidizing agents, etc. Suitable solvents of the **polymers** are DMF, dimethylacetamide, dimethylsulfoxide, tetramethylurea, etc. The casting soln. contains a salt, e.g. CaCl<sub>2</sub> or LiCl, to **reduce** the vapor pressure and improve the thermal stability, usually .apprx.25-45 wt.% of the **polymer**. The solvent evapn. should be at a rate just sufficient to form a uniform, continuous solvent-free zone at the air-soln. interface. Drying is generally at .apprx.50-150.degree. for .apprx.15-200 min. An effective linear polyamide results from the copolymerization of 1,3-bis(3-aminobenzamido)benzene, terephthaloyl chloride, and 3,5-diaminobenzoic acid. Crosslinking may also be achieved by exposing the coagulated and extracted membrane to radiation, e.g. .gamma. radiation at .apprx.8.75 times. 105 Rads/hr 0.5-12 hr.

ST reverse osmosis membrane **polymer**; aminobenzamidobenzene **polymer** reverse osmosis; terephthaloyl chloride **polymer** reverse osmosis; aminobenzoic acid **polymer** reverse osmosis; polyamide resin membrane reverse osmosis

IT Polyamides, uses and miscellaneous  
RL: USES (Uses)  
(membranes of improved flux stability from crosslinked, for water purifn. by reverse osmosis)

IT Water purification **Best Available Copy**  
 (reverse osmosis, crosslinked polyamide membranes for)

IT 517-21-5 58640-09-8  
 RL: OCCU (Occurrence)  
 (crosslinking agents for polyamides, for reverse osmosis membranes of improved flux stability)

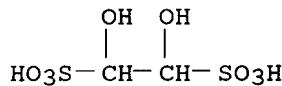
IT 51485-41-7  
 RL: OCCU (Occurrence)  
 (membrane, reverse osmosis purifn. of water by)

IT 25035-07-8 27026-87-5  
 RL: OCCU (Occurrence)  
 (membranes from crosslinked, reverse osmosis purifn. of water by)

IT 29889-65-4  
 RL: OCCU (Occurrence)  
 (membranes from formaldehyde crosslinked, reverse osmosis purifn. of water by)

IT 517-21-5  
 RL: OCCU (Occurrence)  
 (crosslinking agents for polyamides, for reverse osmosis membranes of improved flux stability)

RN 517-21-5 HCAPLUS  
 CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
 (CA INDEX NAME)



●2 Na

L15 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1973:85768 HCAPLUS  
 DN 78:85768  
 TI Durable press wool fabric  
 AU Wasley, W. L.; Pittman, A. G.; Jones, C. C.; Fong, W.; Pardo, C. E.  
 CS West. Reg. Res. Lab., U. S. Dep. Agric., Berkeley, Calif., USA  
 SO Text. Chem. Color. (1973), 5(1), 25-8  
 CODEN: TCCOB6  
 DT Journal  
 LA English  
 CC 39-10 (Textiles)  
 AB A procedure for prep. durable-press machine-washable wool fabrics involved treating the fabric with an emulsion contg. a glycidol-terminated polyurethane shrinkproofing **polymer**, a crosslinking agent, e.g. N-methylolacrylamide [924-42-5], and a **reducing** agent, i.e. a bisulfite, and drying the fabric without curing the **polymer**. The fabric was made into a garment which was sprayed to 40-50% pickup with a 4% aq. soln. of Ma glyoxal bisulfite [39003-51-5], steam pressed (30 sec steam, 20 sec bake, and 10 sec vacuum), and cured 10-15 min at 300-310.deg.F. The garments retained the desired creases and smoothness through >10 launderings and tumble dryings.  
 ST shrinkproofing wool fabric; durable press finishing wool; urethane **polymer** shrinkproofing wool; methylolacrylamide crosslinking agent wool; acrylamide deriv crosslinking wool  
 IT Textiles  
 (durable-press finishing and shrinkproofing of woolen, by urethane **polymers** and methylolacrylamide)  
 IT Creasing  
 (durable-press, of woolen textiles, with simultaneous shrinkproofing)  
 IT Creaseproofing  
 (of woolen textiles, with simultaneous shrinkproofing)  
 IT Rubber, urethane, uses and miscellaneous

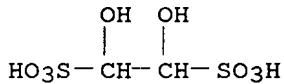
(woolen textiles ~~Best Available Copy~~ glycidyl-terminated Helastic  
10147LV, with simultaneous durable-press finishing)

IT 517-21-5  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, in durable-press finishing and shrinkproofing of woolen  
textiles)

IT 517-21-5  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, in durable-press finishing and shrinkproofing of woolen  
textiles)

RN 517-21-5 HCAPLUS

CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



●2 Na

L15 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1971:99647 HCAPLUS

DN 74:99647

TI Oximidomethanesulfonamides

IN Loev, Bernard

PA Smith Kline and French Laboratories

SO U.S., 4 pp. Continuation-in-part of U.S. 3,480,636  
CODEN: USXXAM

DT Patent

LA English

IC C07C

NCL 260556000

CC 25 (Noncondensed Aromatic Compounds)

FAN.CNT 1

|  | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------------|------|------|-----------------|------|
|--|------------|------|------|-----------------|------|

PI US 3549702 A 19701222 US 1967-672998 19671005

AB Continuation-in-part of U.S. 3,480,636 (CA 72: 42793c).

Oximido-methanesulfonamides R1C(:NOR2)SO2NR3R4 (I) are prep'd. either by  
redn. of a nitromethanesulfonamide or oximation of a  
methanesulfonamide. The latter procedure is preferred. For example,  
N,N-dimethyl-.alpha.-toluenesulfonamide in dry THF was added to a slurry  
of KH in THF keeping the temp. below 40.degree.. The mixt. was stirred  
for 30 min at 30.degree., cooled to 10.degree. and Bu nitrite added. The  
mixt. was then stirred for 3.5 hr to give I (R1 = Ph, R2 = H, R3 = R4 =  
Me). I (R2 = H) was alkylated to I (R2 = alkyl, such as Me) which are  
useful as emulsifying agents, **plasticizers** and herbicides.

ST emulsifying agent; oximidomethanesulfonamide; methanesulfonamide oximido;  
hydroxyimino methanesulfonamide; herbicidal methanesulfonamide;

**plasticizer**

IT 22184-76-5P 22184-78-7P 31161-96-3P 31161-97-4P 31161-98-5P

32685-00-0P 32831-62-2P

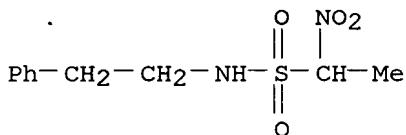
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT 31161-98-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 31161-98-5 HCAPLUS

CN Ethanesulfonamide, 1-nitro-N-phenethyl- (8CI) (CA INDEX NAME)



L15 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2000 ACS

AN 1971:32038 HCAPLUS

DN 74:32038

TI **Polymers** containing anthraquinone units: polyimidazoles and polypyrrrolones from 1,2,5,6-tetraaminoanthraquinone

AU Pense, Rolf; Marvel, Carl S.

CS Dep. Chem., Univ. Arizona, Tucson, Ariz., USA

SO J. Polym. Sci., Part A-1 (1970), 8(11), 3189-98

CODEN: JPLCAT

DT Journal

LA English

CC 35 (Synthetic High Polymers)

AB 1,2,5,6-Tetraaminoanthraquinone was condensed with isophthalaldehyde and terephthalaldehyde and their bisulfite addn. compds. to yield new heat-stable **polymers**. It has also been condensed with pyromellitic anhydride to give the pyrrolone. The highest viscosities were obtained in **polymers** prep'd. with acid catalysts. The **polymers** were nearly all sol. in concd. H<sub>2</sub>SO<sub>4</sub> but not in org. solvents. Those sol. in H<sub>2</sub>SO<sub>4</sub> could also be solubilized by **redn** with Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> and KOH in aq. org. solns. A few **polymers** were apparently crosslinked, since they would not dissolve in either H<sub>2</sub>SO<sub>4</sub> or in base or **redn**. Weak fibers were obtained by spinning the **reduced** alk. solns. of the **polymers** into aq. acid.

ST aminoanthraquinones polyamides; polyamides aminoanthraquinones; anthraquinones polyamides; polyimidazoles; polypyrrrolones; phthalamides **polymers**

IT Ring closure

(in **polymn.**, of aromatic dialdehydes with tetraaminoanthraquinone)

IT **Polymerization**

(ring closure and, of aromatic dialdehydes with tetraaminoanthraquinone)

IT Isoindolo[2,1-a]anthra[1,2-d:5,6-d']diimidazole, derivs., **polymers**

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

IT Anthraquinone, 1,2,5,6-tetraamino-, **polymer** with disodium .alpha.,.alpha.'-dihydroxy-m-xylene-.alpha.,.alpha.'-disulfonate Anthraquinone, 1,2,5,6-tetraamino-, **polymer** with disodium .alpha.,.alpha.'-dihydroxy-p-xylene-.alpha.,.alpha.'-disulfonate Methanesulfonic acid, p-phenylenedi-, disodium salt, **polymer** with 1,2,5,6-tetraaminoanthraquinone

Methanesulfonic acid, m-phenylenebis[hydroxy-, disodium salt, **polymer** with 1,2,5,6-tetraaminoanthraquinone

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, ring closure in)

IT 30133-18-7

RL: USES (Uses) (model compd., for aromatic dialdehyde-tetraaminoanthraquinone **polymers**)

IT 30133-29-0P 30133-30-3P 31546-93-7P 31546-94-8P 31546-99-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

IT 30110-06-6P 30110-10-2P 32506-80-2P

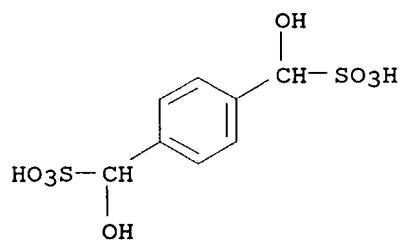
RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, ring closure in)

IT 30133-29-0P 30133-30-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 30133-29-0 HCPLUS Best Available Copy

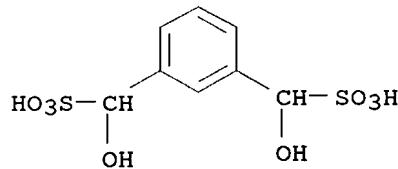
CN 1,4-Benzenedimethanesulfonic acid, .alpha.,.alpha.'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

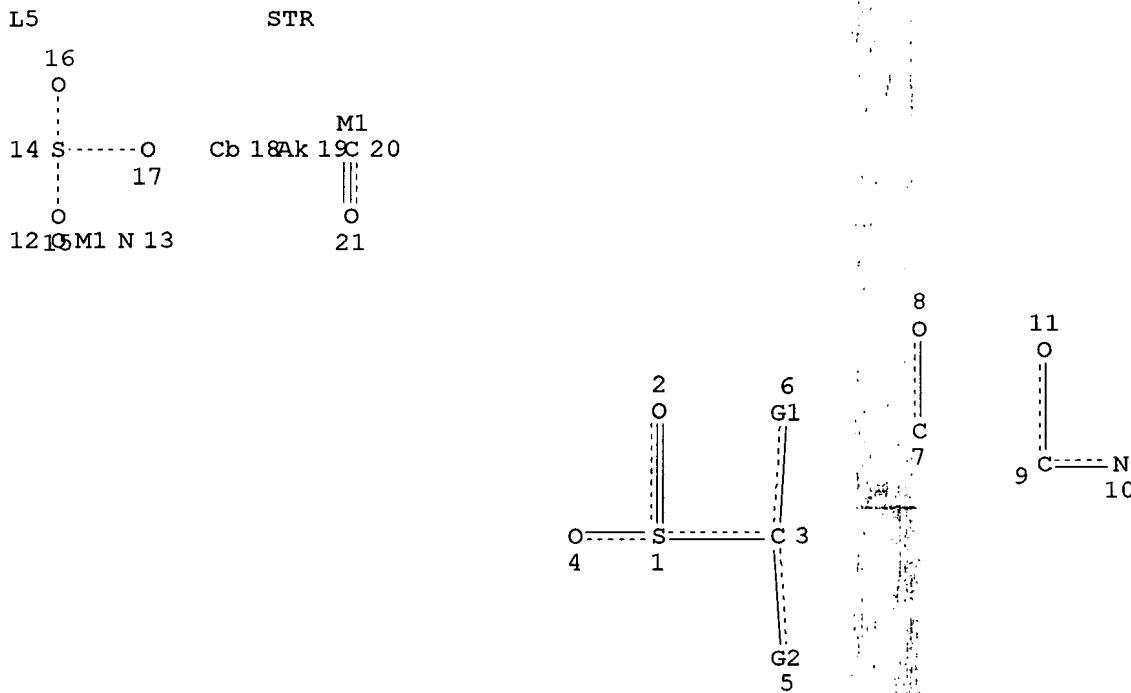
RN 30133-30-3 HCPLUS

CN 1,3-Benzenedimethanesulfonic acid, .alpha.,.alpha.'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

Hardee 09/319, 108



VAR G1=12/13  
 VAR G2=14/18/19/20/7/9

## NODE ATTRIBUTES:

HCOUNT IS M1 AT 12  
 HCOUNT IS M1 AT 20  
 NSPEC IS C AT 1  
 NSPEC IS C AT 2  
 NSPEC IS C AT 3  
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 NSPEC IS C AT 9  
 NSPEC IS C AT 10  
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 DEFAULT ECLEVEL IS LIMITED

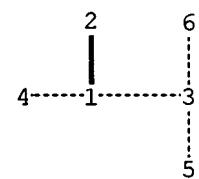
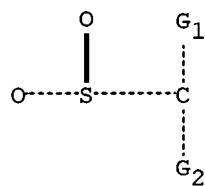
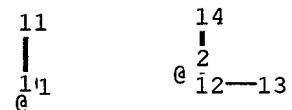
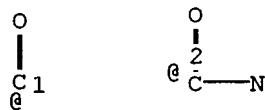
## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 21

## STEREO ATTRIBUTES: NONE

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 L8 977 SEA FILE=HCAPLUS ABB=ON PLU=ON L7  
 L9 73568 SEA FILE=HCAPLUS ABB=ON PLU=ON (INDUSTRIAL ORGANIC CHEMICALS,  
 LEATHER, FATS, AND WAXES)/SC, SX  
 L10 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 AND L9  
 L13 187 SEA FILE=HCAPLUS ABB=ON PLU=ON REDUC? AND L8  
 L14 20 SEA FILE=HCAPLUS ABB=ON PLU=ON (POLYMER? OR PLASTIC?) AND  
 L13  
 L15 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 NOT L10

L16 24 SEA FILE=Best Available Copy PLU=ON L13 AND (TEXTILE OR PRINT? OR  
BLEACH? OR DYE?)  
L17 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 NOT (L15 OR L10)



chain nodes :  
1 2 3 4 5 6 10 11 12 13 14

chain bonds :  
1-2 1-3 1-4 3-5 3-6 10-11 12-13 12-14

exact/norm bonds :  
1-3 1-4 3-5 3-6 10-11 12-13 12-14

exact bonds :  
1-2

G1:OH, N

G2:SO3H, Cb, Ak, CHO, [\*1], [\*2]

Connectivity :

1:3EC

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 10:CLASS  
11:CLASS 12:CLASS 13:CLASS 14:CLASS

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L11 STR

16 O  
14 S ----- O Cb 18Ak 19C 20  
17 M1  
12 15 M1 N 13 21

8 O  
7 C  
2 O  
6 G1  
O ~~~ S ~~~ C 3

Page 1-A

4 1  
G2  
5

Page 2-A

VAR G1=12/13

VAR G2=14/18/19/20/7/9

NODE ATTRIBUTES:

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HCOUNT IS M1 AT 20  
NSPEC IS C AT 1  
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DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 1 2 3 4 7 8 9 10 11 12 13 14 15 16 17 18 19  
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GRAPH ATTRIBUTES: **Best Available Copy**

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NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

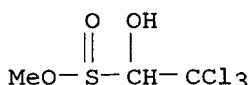
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L14 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L13

Hardee 09/319, 108

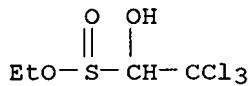
L14 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1989:573609 HCAPLUS  
 DN 111:173609  
 TI Method of producing esters of 2,2,2-trichloro-1-hydroxyethylsulfinic acid  
 IN Baires, S. V.; Vil'danova, L. T.; Ivanov, V. B.; Ivanov, B. E.  
 PA Arbuzov, A. E., Institute of Organic and Physical Chemistry, USSR  
 SO U.S.S.R.  
 From: Otkrytiya, Izobret. 1989, (18), 94.  
 CODEN: URXXAF  
 DT Patent  
 LA Russian  
 IC ICM C07C145-00  
 ICA A01N041-04  
 CC 23-12 (Aliphatic Compounds)  
 FAN.CNT 1

|    | PATENT NO.                                                                                                                                                                                                                                                                                                 | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|----------|
| PI | SU 1479453                                                                                                                                                                                                                                                                                                 | A1   | 19890515 | SU 1986-4091985 | 19860709 |
| AB | The title esters $CCl_3CH(OH)S(O)OR$ (R = Me, Et, Pr, Bu, propargyl, allyl, acetylisopropenyl) are prepd. by reaction of an equimolar mixt. of chloral and $SCl_2$ with 1-2 mol ROH at -25 to -10.degree. in an inert gas atm. For R = allyl or propargyl, the process is carried out in $CH_2Cl_2$ .      |      |          |                 |          |
| ST | chlorohydroxyethylsulfinate; sulfinate trichlorohydroxyethyl; ethylsulfinate trichlorohydroxy                                                                                                                                                                                                              |      |          |                 |          |
| IT | 123067-04-9P 123067-05-0P 123067-06-1P<br>123067-07-2P 123067-08-3P 123067-09-4P<br>123067-10-7P                                                                                                                                                                                                           |      |          |                 |          |
|    | RL: SPN (Synthetic preparation); PREP (Preparation)<br>(prepn. of, from chloral, sulfur dichloride, and alc.)                                                                                                                                                                                              |      |          |                 |          |
| IT | 10545-99-0, Sulfur dichloride<br>RL: RCT (Reactant)<br>(reaction of, with chloral and alcs., trichlorohydroxyethylsulfinate from)                                                                                                                                                                          |      |          |                 |          |
| IT | 64-17-5, Ethanol, reactions 67-56-1, Methanol, reactions 71-23-8, Propanol, reactions 71-36-3, Butanol, reactions 107-18-6, Allyl alcohol, reactions 107-19-7, Propargyl alcohol 1522-20-9<br>RL: RCT (Reactant)<br>(reaction of, with chloral and sulfur dichloride, trichlorohydroxyethylsulfinate from) |      |          |                 |          |
| IT | 75-87-6, Chloral<br>RL: RCT (Reactant)<br>(reaction of, with sulfur dichloride and alcs., trichlorohydroxyethylsulfinate from)                                                                                                                                                                             |      |          |                 |          |
| IT | 123067-04-9P 123067-05-0P 123067-06-1P<br>123067-07-2P 123067-08-3P 123067-09-4P<br>123067-10-7P                                                                                                                                                                                                           |      |          |                 |          |
|    | RL: SPN (Synthetic preparation); PREP (Preparation)<br>(prepn. of, from chloral, sulfur dichloride, and alc.)                                                                                                                                                                                              |      |          |                 |          |
| RN | 123067-04-9 HCAPLUS                                                                                                                                                                                                                                                                                        |      |          |                 |          |
| CN | Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, methyl ester (9CI) (CA INDEX NAME)                                                                                                                                                                                                                        |      |          |                 |          |

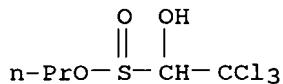


RN 123067-05-0 HCAPLUS  
 CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, ethyl ester (9CI) (CA INDEX NAME)

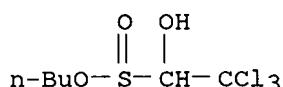
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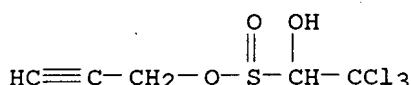
RN 123067-06-1 HCAPLUS  
CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, propyl ester (9CI) (CA INDEX NAME)



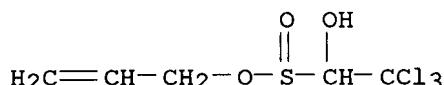
RN 123067-07-2 HCAPLUS  
CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, butyl ester (9CI) (CA INDEX NAME)



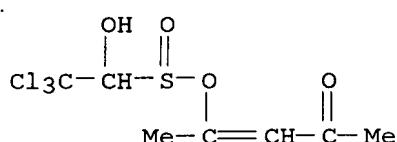
RN 123067-08-3 HCAPLUS  
CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, 2-propynyl ester (9CI) (CA INDEX NAME)



RN 123067-09-4 HCAPLUS  
CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, 2-propenyl ester (9CI) (CA INDEX NAME)



RN 123067-10-7 HCAPLUS  
CN Ethanesulfinic acid, 2,2,2-trichloro-1-hydroxy-, 1-methyl-3-oxo-1-butenyl ester (9CI) (CA INDEX NAME)



L14 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2000 ACS  
AN 1975:427265 HCAPLUS  
DN 83:27265  
TI Oxidation products of carbothioamides. XXXII. Thiobenzanilide S,S-dioxide as reactive aminosulfene intermediate in the oxidative imidate formation from thiobenzanilide S-oxide in the presence of alcohols  
AU Walter, Wolfgang; Bauer, Otto H.

CS Inst. Org. Chem. Biochem. Inst. Hamburg, Hamburg, Ger.

SC: Justus Liebigs Ann. Chem. (1975), (2), 305-10

CODEN: JLACBF

DT Journal

LA German

CC 22-5 (Physical Organic Chemistry)

AB Evidence for aminosulfene formation in the oxidn. of PhC(SO)NPh (e.g., with m-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>OH) was obtained, consisting of the formation of imidates, PhC(OR):NPh (R = alkyl), in the presence of alcs. The formation of benzanilide in the absence of nucleophiles indicates another reaction path competing with imidate formation and predominating in the case of sterically hindered alcs. At higher pH values product analysis indicates a different mechanism.

ST oxidn thiobenzanilide oxide mechanism; sulfene intermediate oxidn thiobenzanilide oxide; imidate formation oxidn thiobenzanilide oxide; benzanilide thio oxide oxidn

IT Substitution reaction  
(of sulfur, in thiobenzanilide oxide)

IT Oxidation  
(of thiobenzanilide oxide, mechanism of)

IT 56043-47-1

RL: PRP (Properties)  
(intermediate, in oxidn. of thiobenzanilide S-oxide)

IT 6244-77-5

RL: RCT (Reactant)  
(oxidn. of)

IT 18263-20-2

RL: RCT (Reactant)  
(oxidn. of, mechanism of)

IT 6421-04-1P 38921-49-2P 56043-46-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT 6780-39-8

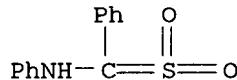
RL: PRP (Properties)  
(trapping of, in oxidn. of thiobenzanilide oxide)

IT 56043-47-1

RL: PRP (Properties)  
(intermediate, in oxidn. of thiobenzanilide S-oxide)

RN 56043-47-1 HCPLUS

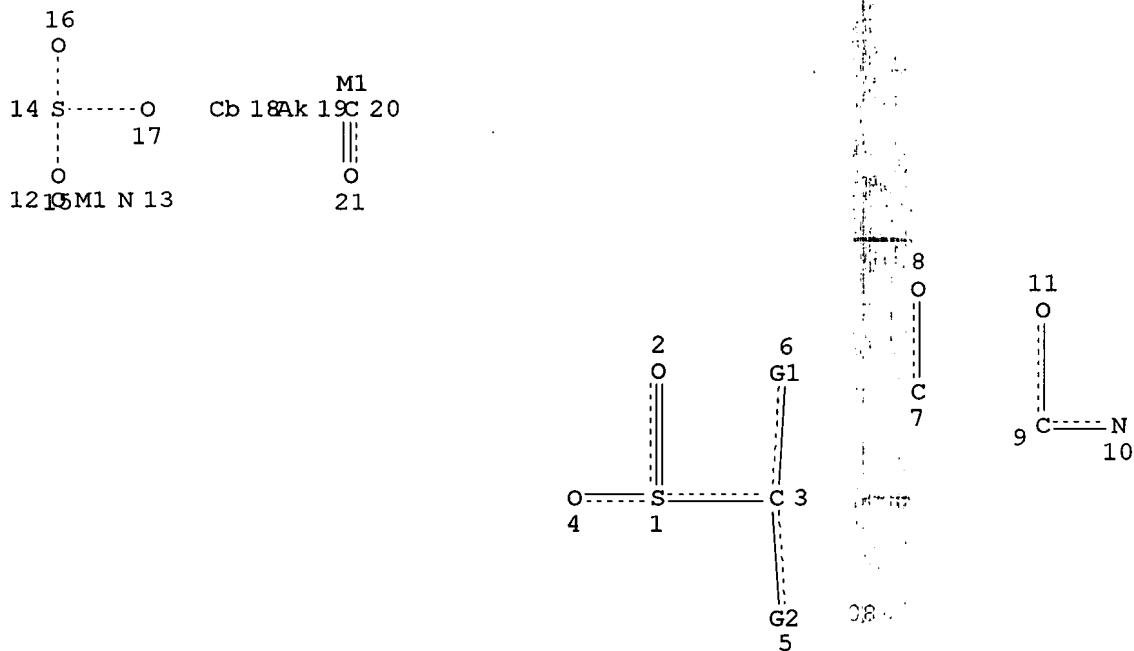
CN Benzenecarbothioamide, N-phenyl-, S,S-dioxide (9CI) (CA INDEX NAME)



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Hardee 09/319, 108

## L1 STR



VAR G1=12/13

VAR G2=14/18/19/20/7/9

## NODE ATTRIBUTES:

|          |        |    |      |    |
|----------|--------|----|------|----|
| HCOUNT   | IS     | M1 | AT   | 12 |
| HCOUNT   | IS     | M1 | AT   | 20 |
| NSPEC    | IS     | C  | AT   | 1  |
| NSPEC    | IS     | C  | AT   | 2  |
| NSPEC    | IS     | C  | AT   | 3  |
| NSPEC    | IS     | C  | AT   | 4  |
| NSPEC    | IS     | C  | AT   | 5  |
| NSPEC    | IS     | C  | AT   | 6  |
| NSPEC    | IS     | C  | AT   | 7  |
| NSPEC    | IS     | C  | AT   | 8  |
| NSPEC    | IS     | C  | AT   | 9  |
| NSPEC    | IS     | C  | AT   | 10 |
| NSPEC    | IS     | C  | AT   | 11 |
| DEFINITE | MLEVEL | IS | ATOM |    |

DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 1 2 3 4 7 8 9 10 11 12 13 14 15 16 17 18 19  
20 21

DEFALT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

STEREO ATTRIBUTES: NONE

L2 ( 1916)SEA FILE=REGISTRY SSS FUL L1  
L3 ( 977)SEA FILE=HCAPLUS ABB=ON PLU=ON L2  
L4 ( 73568)SEA FILE=HCAPLUS ABB=ON PLU=ON (INDUSTRIAL ORGANIC CHEMICALS,  
LEATHER, FATS, AND WAXES) /SC, SX  
L5 ( 5)SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND L4  
L6 ( 187)SEA FILE=HCAPLUS ABB=ON PLU=ON REDUC? AND L3  
L7 ( 20)SEA FILE=HCAPLUS ABB=ON PLU=ON (POLYMER? OR PLASTIC?) AND L6  
L8 ( 19)SEA FILE=HCAPLUS ABB=ON PLU=ON L7 NOT L5  
L9 ( 24)SEA FILE=HCAPLUS ABB=ON PLU=ON L6 AND (TEXTILE OR PRINT? OR

BLEACH? ~~OR~~ **Best Available Copy**  
20 SEA FILE=HCAPLUS ABB=ON PLU=ON L9 NOT (L8 OR L5)

NOT

Best Available Copy

Hardee 09/319, 108

L10 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
AN 1999:421327 HCAPLUS  
DN 131:75290  
TI Liquid **bleach** compositions  
IN Yamazaki, Yasuhiro; Miyasaki, Yoshitaka; Nishioka, Junko  
PA Lion Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C11D007-54  
ICS C11D010-02; C11D007-18; C11D001-04; C11D007-26  
CC 46-5 (Surface Active Agents and Detergents)  
FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 11181491 | A2   | 19990706 | JP 1997-366486  | 19971224 |

AB Liq **bleach** compns., with high **bleaching** power and reduced peroxide decompn. when pH is relatively high, comprise hydrogen peroxide 0.1-30 wt.%, alkali earth metal salts 0.001-1 wt.%, and phenol and its derivs. 0.01-10 wt.%. One such **bleach** compn. comprised hydrogen peroxide 5, calcium chloride 0.05, 4-methoxyphenol 0.1, a secondary alc. ethoxylate 2, 1-hydroxyethane-1,1-disulfonic acid 1 wt.% and had pH 7. The gas generated by the decompn. of hydrogen peroxide after storing for 14 days at 50.degree. was 4 mL.

ST hydrogen peroxide **bleach** liq; calcium chloride liq **bleach**; methoxyphenol liq **bleach**; hydroxyethane disulfonic acid liq **bleach**

IT Bleaching agents

(liq. **bleach** compns.)

IT 108-95-2, Phenol, uses 123-31-9, Hydroquinone, uses 150-76-5, 4-Methoxyphenol 7786-30-3, Magnesium chloride, uses 10043-52-4, Calcium chloride, uses 85985-29-1  
RL: MOA (Modifier or additive use); USES (Uses)

(liq. **bleach** compns.)

IT 7722-84-1, Hydrogen peroxide, uses  
RL: TEM (Technical or engineered material use); USES (Uses)

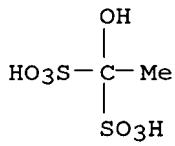
(liq. **bleach** compns.)

IT 85985-29-1  
RL: MOA (Modifier or additive use); USES (Uses)

(liq. **bleach** compns.)

RN 85985-29-1 HCAPLUS

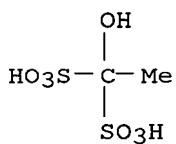
CN 1,1-Ethanedisulfonic acid, 1-hydroxy- (9CI) (CA INDEX NAME)



L10 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
AN 1999:421326 HCAPLUS  
DN 131:75289  
TI Liquid **bleaching** compositions for clothing  
IN Yamazaki, Tomohiro; Miyamae, Yoshitaka; Nishioka, Junko  
PA Lion Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF

DT Patent **Best Available Copy**  
LA Japanese  
IC ICM C11D007-54  
IC ICS C11D003-395; D06L003-02  
CC 46-5 (Surface Active Agents and Detergents)

| FAN.CNT 1 |                                                                                                                                                                                                                                                                                                      | KIND | DATE     | APPLICATION NO. | DATE     |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|----------|
|           | PATENT NO.                                                                                                                                                                                                                                                                                           |      |          |                 |          |
| PI        | JP 11181490                                                                                                                                                                                                                                                                                          | A2   | 19990706 | JP 1997-364688  | 19971218 |
| AB        | Title <b>bleaching</b> compns. comprise (1) hydrogen peroxide 0.1-30 wt.%, calcium salts (calcium chloride) 0.001-1 wt.%, and metal chelating agents (1-hydroxyethane-1,1-disulfonic acid) >0.1 wt.% and have pH in the range of 2-8. The compns. show <b>reduced</b> decompn. of hydrogen peroxide. |      |          |                 |          |
| ST        | hydrogen peroxide <b>bleach</b> liq; calcium chloride liq, hydrogen peroxide <b>bleach</b> ; hydroxyethane disulfonic acid liq <b>bleach</b>                                                                                                                                                         |      |          |                 |          |
| IT        | <b>Bleaching</b> agents<br>(liq. <b>bleaching</b> compns. for clothing)                                                                                                                                                                                                                              |      |          |                 |          |
| IT        | 10043-52-4, Calcium chloride, uses <b>85985-29-1</b><br>RL: MOA (Modifier or additive use); USES (Uses)  <br>(liq. <b>bleaching</b> compns. for clothing)                                                                                                                                            |      |          |                 |          |
| IT        | 7722-84-1, Hydrogen peroxide, uses<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(liq. <b>bleaching</b> compns. for clothing)                                                                                                                                                    |      |          |                 |          |
| IT        | <b>85985-29-1</b><br>RL: MOA (Modifier or additive use); USES (Uses)<br>(liq. <b>bleaching</b> compns. for clothing)                                                                                                                                                                                 |      |          |                 |          |
| RN        | 85985-29-1 HCPLUS                                                                                                                                                                                                                                                                                    |      |          |                 |          |
| CN        | 1,1-Ethanedisulfonic acid, 1-hydroxy- (9CI) (CA INDEX NAME)                                                                                                                                                                                                                                          |      |          |                 |          |



L10 ANSWER 3 OF 20 HCPLUS COPYRIGHT 2000 ACS  
AN 1997:465959 HCPLUS  
DN 127:163102  
TI Kinetics of the **reduction** of binaphthylhexacarboxylic acid  
N,N'-diimide derivatives by sodium hydroxyalkanesulfonates. 2. Modeling of  
the kinetics of the **reductive** cyclization of kubogens in a  
nonsteady-state regime  
AU Polenov, Yu. V.; Kublashvili, G. D.; Labutin, A. N.; Budanov, V. V.  
CS Ivanov. Gos. Khim.-Tekhnol. Akad., Ivanovo, Russia  
SO Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol. (1997), 40(1), 52-55  
CODEN: IVUKAR; ISSN: 0579-2991  
PB Ivanovskaya Gosudarstvennaya Khimiko-Tekhnologicheskaya Akademiya  
DT Journal  
LA Russian  
CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic  
Sensitizers)  
AB Math. modeling is carried out to select a mechanism best fitting the  
exptl. kinetics of **redn.** of kubogens. The formation of  
perylene tetracarboxydiimide di- and tetraanions occurs via two parallel  
routes. Rate consts. of sep. reaction steps were calcd.  
ST vat **dye** precursor **redn** hydroxyalkanesulfonate  
kinetics; kubogen **reductive** cyclization mechanism kinetics  
modeling; perylene tetracarboxydiimide anion vat **dye** prep  
IT Cyclization kinetics  
(**reductive**; kinetics of the **redn.** of  
binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
hydroxyalkanesulfonates)

## IT Dyes Best Available Copy

RL: IMF (Industrial manufacture); PREP (Preparation)  
(vat; kinetics of the **redn.** of binaphthylhexacarboxylic acid  
N,N'-diimide derivs. by sodium hydroxyalkanesulfonates)

## IT Reduction kinetics

(with cyclization; kinetics of the **redn.** of  
binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
hydroxyalkanesulfonates)

IT 78565-07-8, Kubogen Red 1-74

RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered  
material use); USES (Uses)  
(Kubogen Red 1-74; kinetics of the **redn.** of  
binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
hydroxyalkanesulfonates)

IT 193747-99-8

RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered  
material use); USES (Uses)  
(Kubogen Red 11-80F; kinetics of the **redn.** of  
binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
hydroxyalkanesulfonates)

IT 78565-08-9

RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered  
material use); USES (Uses)  
(Kubogen Scarlet 5-75; kinetics of the **redn.** of  
binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
hydroxyalkanesulfonates)

IT 149-44-0, Sodium Hydroxymethylsulfinate 4378-67-0, Sodium

1-Hydroxyethanesulfinate 131708-16-2

RL: RCT (Reactant)  
(kinetics of the **redn.** of binaphthylhexacarboxylic acid  
N,N'-diimide derivs. by sodium hydroxyalkanesulfonates)

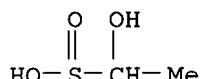
IT 4378-67-0, Sodium 1-Hydroxyethanesulfinate 131708-16-2

RL: RCT (Reactant)

(kinetics of the **redn.** of binaphthylhexacarboxylic acid  
N,N'-diimide derivs. by sodium hydroxyalkanesulfonates)

RN 4378-67-0 HCPLUS

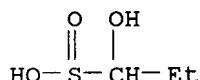
CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX  
NAME)



● Na

RN 131708-16-2 HCPLUS

CN 1-Propanesulfonic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

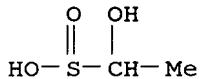
L10 ANSWER 4 OF 20 HCPLUS COPYRIGHT 2000 ACS

AN 1997:465943 HCPLUS

DN 127:163101

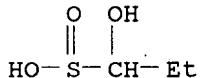
TI Kinetics of **reduction** of binaphthylhexacarboxylic acid

N,N'-diimide derivat **Best Available Copy** hydroxyalkanesulfonates. 1. Kinetics of  
**reduction** in quasi-steady-state approximation  
 AU Polenov, Yu. V.; Kublashvili, G. D.; Budanov, V. V.  
 CS Ivanov. Gos. Khim.-Tekhnol. Akad., Ivanovo, Russia  
 SO Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol. (1997), 40(1), 49-52  
 CODEN: IVUKAR; ISSN: 0579-2991  
 PB Ivanovskaya Gosudarstvennaya Khimiko-Tekhnologicheskaya Akademiya  
 DT Journal  
 LA Russian  
 CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic  
 Sensitizers)  
 AB Kinetics of **reductive** cyclization of binaphthylhexacarboxylic  
 acid N,N'-diimide derivs. (vat **dye** precursors) by sodium  
 hydroxyalkanesulfonates has been studied and alternative step mechanisms  
 have been discussed. All the possible mechanisms involve **redn.**  
 agent splitting step.  
 ST binaphthylhexacarboxylic acid diimide deriv **reductive**  
 cyclization; vat **dye** precursor sodium hydroxyalkanesulfonate  
**redn**; PERYLENETETRACARBOXYLIC anion prodn precursor **redn**  
 kinetics; Kubogen sodium hydroxyalkanesulfonate **redn** cyclization  
 IT Aldehydes, uses  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (kinetics of **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfonates in the presence  
 of)  
 IT Cyclization kinetics  
 (reductive; kinetics of **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfonates in quasi-steady-state approxn.)  
 IT Dyes  
 (vat, precursors; kinetics of **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfonates in quasi-steady-state approxn.)  
 IT Reduction kinetics  
 (with cyclization; kinetics of **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfonates in quasi-steady-state approxn.)  
 IT 193747-99-8, Kubogen Red 11-80F  
 RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered  
 material use); USES (Uses)  
 (Kubogen Red 11-80F; kinetics of **redn.** of  
 binaphthylhexacarboxylic acid N,N'-diimide derivs. by sodium  
 hydroxyalkanesulfonates in quasi-steady-state approxn.)  
 IT 149-44-0, Sodium hydroxymethanesulfonate 4378-67-0, Sodium  
 1-hydroxyethanesulfonate 131708-16-2  
 RL: RCT (Reactant)  
 (kinetics of **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfonates in  
 quasi-steady-state approxn.)  
 IT 150106-96-0P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (kinetics of **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfonates in  
 quasi-steady-state approxn.)  
 IT 50-00-0, Formaldehyde, uses 75-07-0, Acetaldehyde, uses  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (kinetics of **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfonates in the presence  
 of)  
 IT 4378-67-0, Sodium 1-hydroxyethanesulfonate 131708-16-2  
 RL: RCT (Reactant)  
 (kinetics of **redn.** of binaphthylhexacarboxylic acid  
 N,N'-diimide derivs. by sodium hydroxyalkanesulfonates in  
 quasi-steady-state approxn.)  
 RN 4378-67-0 HCPLUS  
 CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX)



● Na

RN 131708-16-2 HCAPLUS  
 CN 1-Propanesulfinic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L10 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1997:293723 HCAPLUS  
 DN 126:265343  
 TI Process for multistage **bleaching** kraft pulp  
 IN Nye, Jeffrey  
 PA Hoechst Celanese Corporation, USA  
 SO Can. Pat. Appl., 27 pp.  
 CODEN: CPXXEB  
 DT Patent  
 LA English  
 IC ICM D21C009-10  
 CC 43-6 (Cellulose, Lignin, Paper, and Other Wood Products)  
 FAN.CNT 1  
 PATENT NO. KIND DATE APPLICATION NO. DATE  
 ----- ----- ----- -----  
 PI CA 2181523 AA 19970121 CA 1996-2181523 19960718  
 US 1690 H1 19971104 US 1995-504818 19950720  
 PRAI US 1995-504818 19950720  
 AB A method for **bleaching** lignocellulose contg. pulp which has been chem. pulped is described wherein the method comprises the steps of sequentially treating the pulp with a **reducing** agent, a chelating agent and an oxidative agent. Thus, a 3-stage **bleaching** sequence was carried out with Na hydrosulfite in a 1st stage, with DTPA in a 2nd stage and with H<sub>2</sub>O<sub>2</sub> in a 3rd stage.  
 ST multistage **bleaching** oxidant **reductant** pulp;  
 hydrosulfite **reductant** multistage **bleaching** pulp;  
 chelatant DTPA multistage **bleaching** pulp; hydrogen peroxide  
 multistage **bleaching** pulp; oxidative **reductive**  
 multistage **bleaching** pulp  
 IT Reducing agents  
 (bleaching agents; process for multistage **bleaching**  
 kraft pulp)  
 IT Inorganic peroxides  
 Peroxy acids  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)  
 (bleaching agents; process for multistage **bleaching**  
 kraft pulp)  
 IT Pulp **bleaching**  
 (multistage; process for multistage **bleaching** kraft pulp)  
 IT Carboxylic acids, uses  
 RL: NUU (Nonbiological use, unclassified); USES (Uses)

(peroxy, ~~bleaching~~ Best Available Copy for multistage  
bleaching kraft pulp)

IT Peroxysulfates  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(peroxydisulfates, **bleaching** agents; process for multistage  
bleaching kraft pulp)

IT Kraft pulp  
(process for multistage **bleaching** kraft pulp)

IT Chelating agents  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(process for multistage **bleaching** kraft pulp)

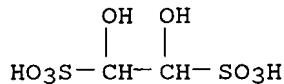
IT 79-21-0, Peracetic acid 107-32-4, Performic acid 517-21-5,  
Sodium glyoxal bisulfite 563-69-9, Carbonoperoxylic acid 870-72-4,  
Sodium formaldehyde bisulfite 1313-60-6, Sodium peroxide 1758-73-2,  
Formamidine sulfonic acid 7446-09-5, Sulfur dioxide, uses 7631-90-5,  
Sodium bisulfite 7681-52-9, Sodium hypochlorite 7722-84-1, Hydrogen  
peroxide, uses 7722-86-3, Peroxymonosulfuric acid 7775-14-6, Sodium  
hydrosulfite 7779-86-4, Zinc hydrosulfite 7782-50-5, Chlorine, uses  
7790-92-3, Hypochlorous acid 10049-04-4, Chlorine dioxide 16940-66-2,  
Sodium borohydride  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(**bleaching** agents; process for multistage **bleaching**  
kraft pulp)

IT 60-00-4, EDTA, uses 67-43-6 15827-60-8  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(chelatant; process for multistage **bleaching** kraft pulp)

IT 517-21-5, Sodium glyoxal bisulfite  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(**bleaching** agents; process for multistage **bleaching**  
kraft pulp)

RN 517-21-5 HCPLUS

CN 1,2-Ethanedisulfonic acid, 1,2-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)



●2 Na

L10 ANSWER 6 OF 20 HCPLUS COPYRIGHT 2000 ACS  
AN 1995:879142 HCPLUS  
DN 124:41275  
TI Processing of silver halide photographic materials using thiosulfonic acid  
to promote removal of impregnated solid **dye** dispersion  
IN Goto, Masatoshi; Fujita, Yoshihiro  
PA Fuji Photo Film Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 51 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03C005-38  
ICS G03C001-83; G03C007-00; G03C007-42  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

FAN.CNT 1

| PATENT NO.          | KIND                                                                       | DATE     | APPLICATION NO. | DATE     |
|---------------------|----------------------------------------------------------------------------|----------|-----------------|----------|
| PI JP 07181637      | A2                                                                         | 19950721 | JP 1993-345971  | 19931224 |
| US 5460923          | A                                                                          | 19951024 | US 1994-362929  | 19941223 |
| PRAI JP 1993-345971 | 19931224                                                                   |          |                 |          |
| AB                  | The claimed method is characterized by (1) that the material has .gtoreq.1 |          |                 |          |

hydrophilic colloid ~~Best Available Copy~~ solid dye dispersion and (2) that it is treated by a soln. having fixing capability and contg. a thiosulfonic acid deriv. RSO<sub>2</sub>SM (R = aliph., arom., heterocyclic group; M = H, cation). The soln. preferably contains ammonium ion in the amt. of 0-50 mol% of total cationic species. The preferable solid dye is combined with a proton-releasing group. The thiosulfonate promotes fixing, **reduces** cyan stain, and also **reduces** the ammonium content in the fixing soln.

ST processing silver halide photog material; thiosulfonate fixing acceleration photog processing

IT Photographic processing

(processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid dye dispersion)

IT 117573-89-4 117573-98-5 162397-81-1 168974-33-2 171664-45-2

RL: DEV (Device component use); USES (Uses)  
(dye; processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid dye dispersion)

IT 1950-85-2 23670-27-1 31999-88-9 42228-91-1 82341-95-5  
**96425-01-3** 119871-23-7 160682-72-4 160682-74-6 171664-44-1

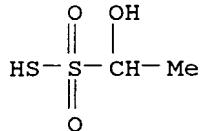
RL: TEM (Technical or engineered material use); USES (Uses)  
(processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid dye dispersion)

IT **96425-01-3**

RL: TEM (Technical or engineered material use); USES (Uses)  
(processing of Ag halide photog. materials using thiosulfonic acid to promote removal of impregnated solid dye dispersion)

RN 96425-01-3 HCPLUS

CN Ethanesulfonothioic acid, 1-hydroxy-, monopotassium salt (9CI) (CA INDEX NAME)



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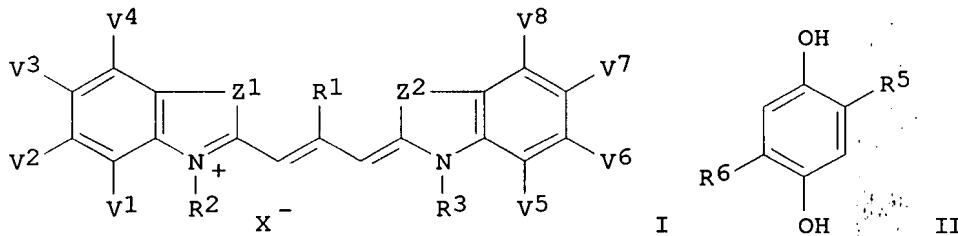
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AB A multilayer color photog. element having improved **redn.** in **dye** strain while having **reduced** color contamination comprises .gtoreq.1 cyan color-forming Ag halide layer which contains a thiacyanine sensitizing **dye** I [Z1 = S or Se; Z2 = Z1 or -NR4; R1 =H, alkyl; R2, R3 and R4 = alkyl or alkenyl group of less than 18 carbon atoms; V1, V2, V3, V4, V5, V6, V7 and V8 = H, halogen, alkyl, alkyloxy, aryl, heterocyclyl, cyano, hydroxy, amino, carbonamido, trifluoromethyl, acyloxy, alkylthio or maybe connected to form one or more addnl. arom. rings; and X represents a counterion, as necessary to balance the overall charge of the **dye**] and .gtoreq.1 nonimaging layer contg. a dialkylhydroquinone II [R5, R6 = alkyl]. The nonimaging layer is adjacent the layer contg. the thiacyanine sensitizing **dye** or is in an antihalation layer. The photog. material provides improved **redn.** in **dye** stain and **reduced** color contamination.

ST photog sensitizer color contamination; alkylhydroquinone photog emulsion scavenger

## IT Photographic emulsions

(dialkylhydroquinone scavenger)

## IT Photographic sensitizers

(thiacyanine **dye** in presence of dialkylhydroquinone scavenger)

## IT Photographic films

(color, reduced color contamination)

IT 18426-55-6 27268-50-4 155621-18-4 166304-59-2 166304-61-6  
166304-63-8 **166304-65-0** 166304-66-1 166304-68-3

RL: MOA (Mo

(photog. sensitizer in presence of dialkylhydroquinone)

RL: MOA (Mo

(scavenger; photog. films with **reduced** color contamination)

IT 166304-65-0

RL: MOA (Modifier or additive use); USES (Uses) name:

(photog. sensitized)  
PN 1666224 65-2 HGR-PLUG

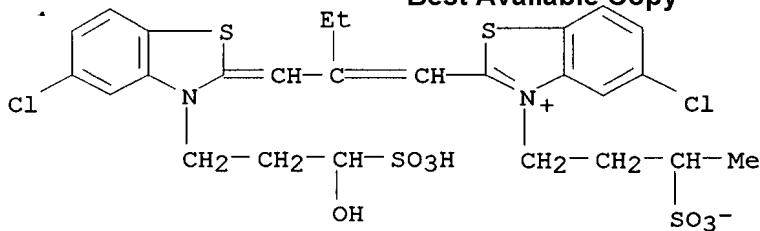
RN 166304-65-0 HCAPLUS  
CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-hydroxy-3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

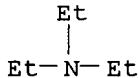
CBN 166304-64-9

CME C26 H28 C12 N2 Q7 S4

## Best Available Copy



CM 2

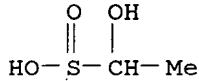
CRN 121-44-8  
CMF C6 H15 N

L10 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1991:64230 HCAPLUS  
 DN 114:64230  
 TI Reduction of vat **dye** precursors by sodium hydroxy- and aminoalkylsulfinates  
 AU Polenov, Yu. V.; Kublashvili, G. D.; Budanov, V. V.; Belkin, A. I.; Vorozhtsov, G. N.  
 CS Ivanov. Khim.-Tekhnol. Inst., Ivanovo, USSR  
 SO Zh. Prikl. Khim. (Leningrad) (1990), 63(7), 1622-5  
 CODEN: ZPKHAB; ISSN: 0044-4618  
 DT Journal  
 LA Russian  
 CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
 AB A kinetic equation is given for the **reductive** cyclization of 1,1'-binaphthyl-4,4',5,5',8,8'-hexacarboxylic acid N,N'-bis(4-chlorophenyl)diimide Na salt (I) (precursor for perylenedicarboximide vat **dye**) with Na hydroxy- and aminoalkylsulfinates, and rate consts. of the **redn.** were detd. The cyclization gave 3 forms of the perylene final product, differing in the no. and position of **reduced** carbonyl groups in the mol. A scheme of stepwise **redn.** was proposed. Addnl. oxidn. of the perylene **dye** was necessary for effective use of I in **printing textiles**.  
 ST vat **dye** precursor **reductive** cyclization; binaphthylhexacarboxylic diimide **reductive** cyclization; hydroxyalkylsulfinate **reducing** agent **dye** precursor; aminoalkylsulfinate **reducing** agent **dye** precursor; **reducing** agent binaphthylhexacarboxylic diimide; perylenedicarboximide precursor **reductive** cyclization  
 IT Kinetics of ring closure (reductive, of binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat **dye**, with Na amino- and hydroxyalkylsulfinates)  
 IT Ring closure and formation (reductive, of binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat **dye**, with Na amino- and hydroxyalkylsulfinates, mechanism of)  
 IT 131692-30-3P 131692-31-4P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation) (formation of, in **reductive** cyclization of binaphthylhexacarboxylic diimide Na salt with Na amino- and hydroxyalkylsulfinates)

IT 149-44-0, Sodium hydroxymethanesulfinate **4378-67-0**, Sodium 1-hydroxyethanesulfinate **84195-72-2**, Sodium 1-aminoethanesulfinate **84195-73-3**, Sodium aminomethylsulfinate **97533-73-8**, Sodium (dimethylamino)methylsulfinate **97533-74-9**, Sodium (diethylamino)methylsulfinate **131708-16-2**, Sodium 1-hydroxypropanesulfinate  
 RL: USES (Uses)  
 (reducing agents, for reductive cyclization of binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat dye, kinetics and mechanism in relation to)  
 IT 131708-15-1  
 RL: RCT (Reactant)  
 (reductive cyclization of, to perylenedicarboximide vat dye, with sodium hydroxy- and aminoalkylsulfinate, kinetics and mechanism of)  
 IT **4378-67-0**, Sodium 1-hydroxyethanesulfinate **84195-72-2**, Sodium 1-aminoethanesulfinate **131708-16-2**, Sodium 1-hydroxypropanesulfinate  
 RL: USES (Uses)  
 (reducing agents, for reductive cyclization of binaphthylhexacarboxylic diimide Na salt to perylenedicarboximide vat dye, kinetics and mechanism in relation to)

RN 4378-67-0 HCPLUS

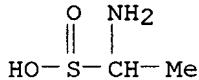
CN Ethanesulfinic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 84195-72-2 HCPLUS

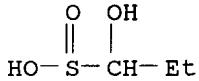
CN Ethanesulfinic acid, 1-amino-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 131708-16-2 HCPLUS

CN 1-Propanesulfinic acid, 1-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L10 ANSWER 9 OF 20 HCPLUS COPYRIGHT 2000 ACS

AN 1989:441306 HCPLUS

DN 111:41306

TI Removal of peroxides from textile treatment baths

IN Gerlach, Rainer; Hilpert, And ~~Best Available Copy~~; Raimann, Wolfgang  
 PA Bayer A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 9 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM D06M009-08  
 ICS D06M007-00; D06M005-06; D06M003-22; D06M003-08; D06M001-00;  
 D06L003-14; D06P005-00; D06P001-38  
 CC 40-8 (Textiles and Fibers)  
 FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | DE 3721765 | A1   | 19890112 | DE 1987-3721765 | 19870701 |
|    | DE 3721765 | C2   | 19930819 |                 |          |

AB Peroxides are removed from alkali treatment baths, which are produced by bleaching of cellulosic **textiles** with H<sub>2</sub>O<sub>2</sub>, by using as the **reducing** agent alkali sulfite, -hydrogen sulfite, or -pyrosulfite and optionally 1-hydroxyalkanesulfonate or its adduct with an aldehyde. The treated bath then can be used for reactive **dyeing**. A cotton knit was treated with an alk. H<sub>2</sub>O<sub>2</sub> (6 mL 32%/L) bath at 95.degree. for 30 min and the residual H<sub>2</sub>O<sub>2</sub> content was 50% of the initial concn. and pH 11.5. Two thirds of the bath was drained and contents brought to initial level with cold H<sub>2</sub>O, an aq. contg. Na pyrosulfite 3, NOAc 0.4, phosphonobutane:1,2,4-tricarboxylic acid 0.2, Na decylsulfite 0.1, acetaldehyde 0.05, Na hydroxymethanesulfonate 0.05, and naphthalene-formaldehyde condensation product 0.05 wt.% was added until the bath gave a neg. test for H<sub>2</sub>O<sub>2</sub>. A reactive yellow **dye** and NaHCO<sub>3</sub> was added to the bath, heated 1 h at 45.degree., washed, rinsed, and dried to give brilliant, level yellowish gold **dyeing**.

ST **bleaching** peroxide removal sulfite; hydroxyalkylsulfonate peroxide removal; acetaldehyde peroxide removal; **dyeing** bleach bath reactive

IT **Reducing** agents  
(in removal of peroxides from **textile bleach** baths)

IT **Bleaching**  
(of **textiles** with hydrogen peroxide, peroxide removal from bath in, **reducing** agents for)

IT **Dyeing**  
(reactive, of cellulosic **textiles**, use of **reduced** peroxide **bleach** baths for)

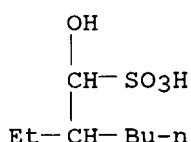
IT 7722-84-1  
(**bleaching**, of **textiles** with hydrogen peroxide, peroxide removal from bath in, **reducing** agents for)

IT 75-07-0, Acetaldehyde, uses and miscellaneous 870-72-4, Sodium hydroxymethane sulfonate 7631-90-5, Sodium hydrogen sulfite 7681-57-4, Sodium pyrosulfite 13521-83-0, Sodium glutarate 121591-01-3  
(**reducing** agent, in removal of peroxides from **textile bleach** baths)

IT 121591-01-3  
(**reducing** agent, in removal of peroxides from **textile bleach** baths)

RN 121591-01-3 HCPLUS

CN 1-Hexanesulfonic acid, 2-ethyl-1-hydroxy- (9CI) (CA INDEX NAME)



L10 ANSWER 10 OF 20 HCPLUS COPYRIGHT 2000 ACS  
 AN 1986:635689 HCPLUS  
 DN 105:235689

TI Processing method of ~~Best Available Copy~~ color photosensitive material  
 IN Kurematsu, Masayuki; Koboshi, Shigeharu  
 PA Konishiroku Photo Industry Co., Ltd., Japan  
 SO Eur. Pat. Appl., 89 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03C007-40  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

|    | PATENT NO.    | KIND           | DATE     | APPLICATION NO. | DATE     |  |
|----|---------------|----------------|----------|-----------------|----------|--|
| PI | EP 186504     | A2             | 19860702 | EP 1985-309441  | 19851223 |  |
|    | EP 186504     | A3             | 19880720 |                 |          |  |
|    | EP 186504     | B1             | 19910306 |                 |          |  |
|    | R: BE, DE, GB |                |          |                 |          |  |
|    | JP 61151649   | A2             | 19860710 | JP 1984-280964  | 19841226 |  |
|    | JP 63034460   | B4             | 19880711 |                 |          |  |
|    | CA 1287249    | A1             | 19910806 | CA 1985-498682  | 19851227 |  |
|    | US 4855217    | A              | 19890808 | US 1988-170670  | 19880318 |  |
|    | PRAI          | JP 1984-280964 | 19841226 |                 |          |  |
|    |               | US 1985-812591 | 19851223 |                 |          |  |
|    | US 1987-21533 | 19870226       |          |                 |          |  |

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A developed Ag halide color photog. material is treated with a fixing or bleach-fixing soln. and, without the washing step, treated with a washless stabilizing soln. in the presence of .gtoreq.1 of the compds. I, II, III, and IV [R-R5 = H, halogen, OH, alkyl, alkoxy, sulfo, NHCH2SO3M (M = cation); R6, R8 = H, alkyl, aryl, heterocyclyl; R7, R9 = OH, alkoxy, substituted alkoxy, CN, CF3, CO2R18, CONHR18, NHCOR18 (R18 = H, alkyl, aryl), NH2, Cl-4 alkyl-substituted NH2, V (X1 = O, S, CH2; p, q = 1, 2); n = 0, 1, 2; m, o = 0, 1; R10-R13 = H, alkyl, aryl, alkoxy, aralkyl, heterocyclyl; .gtoreq.1 of R10-R13 is a group other than H; X = 0.5; r = 1, 2, 3; R14 = alkyl, aryl heterocyclyl; R15 = OH, alkyl, alkoxy, substituted alkoxy, CN, CF3, CO2R18, CONHR18, NHCOR18, NH2, Cl-4 alkyl-substituted NH2, V (X1, R18, p, q are the same as above); R16 = OR19, NR20R21 (R19, R20, R21 = H, alkyl, R20 and R21 in combination with the N atom may form a ring); R17 = H, Cl, alkoxy, alkyl; l = 1, 2]. The new photog. processing method makes it possible to largely **reduce** the amt. of water for washing, thus providing reservation of water resources and environmental protection. Thus, a polyethylene-coated paper support was coated with a blue-sensitive Ag halide emulsion layer, a gelatin layer, a green-sensitive Ag halide emulsion layer, a gelatin layer, a red-sensitive Ag halide emulsion layer, and a gelatin layer to give a color photog. film, exposed, color developed, **bleach-fixed**, stabilized in a soln. contg. 5-chloro-2-methyl-4-isothiazolin-3-one 0.02, 2-methyl-4-isothiazolin-3-one 0.02, ethylene glycol 1.0, 2-octyl-4-isothiazolin-3-one 0.01, 60% aq. 1-hydroxyethylidene-1,1-disulfonic acid 3.0, 45% aq. BiCl3 0.65, MgSO4.7H2O 0.2, 25% NH4OH 2.5, tri-Na nitrilotriacetate 1.5, and HCHO-Na2SO3 adduct 3.0 g, VI 5 mg, and H2O to 1 L (with pH adjusted to 7.0 with H2SO4), and dried to give a print with yellow stain 0.09 (immediately after processing) and 0.09 (after 2 wk storage) and cyan **dye** fading rate 24% (immediately after processing) and 24% (after 2 wk storage) vs. 0.10 and 0.24 and 49% and 42%, resp., for a control using a stabilizing soln. contg. HCHO 1 g/L in the place of the HCHO-Na2SO3 adduct and HO VI.

ST stabilizing soln washless color processing

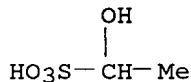
IT Aldehydes, uses and miscellaneous

RL: USES (Uses)

(washless photog. stabilizing solns. contg., for color processing)

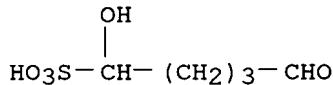
R20P

IT Photographic process **Best Available Copy**  
 (color, washless stabilizing solns. for)  
 IT 53953-04-1 63059-36-9 66096-14-8 104497-94-1 104881-81-4  
 105344-47-6  
 RL: USES (Uses)  
 (washless photog. stabilizing solns. contg. aldehyde and, for color  
 processing)  
 IT 50-00-0, uses and miscellaneous 75-07-0, uses and miscellaneous  
 111-30-8 870-72-4 **918-04-7 58202-08-7**  
 RL: USES (Uses)  
 (washless photog. stabilizing solns. contg., for color processing)  
 IT **918-04-7 58202-08-7**  
 RL: USES (Uses)  
 (washless photog. stabilizing solns. contg., for color processing)  
 RN 918-04-7 HCAPLUS  
 CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX  
 NAME)



● Na

RN 58202-08-7 HCAPLUS  
 CN 1-Pentanesulfonic acid, 1-hydroxy-5-oxo-, monosodium salt (9CI) (CA INDEX  
 NAME)

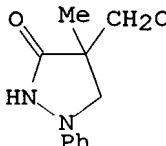
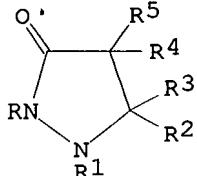


● Na

L10 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1986:99430 HCAPLUS  
 DN 104:99430  
 TI Method of **dye** image formation  
 IN Hirabayashi, Shigeto; Oya, Yukio  
 PA Konishiroku Photo Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03C007-26  
 ICS G03C007-30  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 FAN.CNT 1

| PATENT NO.     | KIND  | DATE     | APPLICATION NO. | DATE     |
|----------------|-------|----------|-----------------|----------|
| -----          | ----- | -----    | -----           | -----    |
| PI JP 60165651 | A2    | 19850828 | JP 1984-21385   | 19840208 |
| GI             |       |          |                 |          |

## Best Available Copy



AB An imagewise-exposed Ag halide photog. material that contains .gtoreq.1 compd. having the formula I [R = H, acetyl; R1 = aryl; R2-R5 = (independently) H, alkyl, aryl], and having an av. AgBr content (in total Ag halide) .ltoeq.50% is treated with a color developer contg. Br- corresponding to .gtoreq.1.3 g/L KBr. This processing method **reduces** the amt. of replenisher required for bulky continuous processing, and provides high image d. despite the high Br- concn. Thus, a photog. color paper was prep'd. by coating a polyethylene-coated paper support with 8 layers, which were a layer contg. 30 mg II and gelatin, a blue-sensitive emulsion layer (AgBr 50%) contg. a yellow coupler, an intermediate gelatin layer, a green-sensitive emulsion layer (AgBr 30%) contg. a magenta coupler, an intermediate gelatin layer, a red-sensitive emulsion layer (AgBr 30%) contg. a cyan coupler, an intermediate gelatin layer, and a surface gelatin layer. A color developer for the exposed film contained benzyl alc. 8 mL, NH2OH sulfate 2, KBr 1.4, NaCl 1.0, K2SO3 2.0, triethanolamine 2.0, N-ethyl-N-.beta.-methanesulfonamidoethyl-3-methyl-4-aminoaniline sulfate 4.5, K2CO3 32 g, 60% 1-hydroxyethylidene-1,1-disulfonic acid 1.5, fluorescent brightener (50% soln. of Whitex BB) 2 mL, and water 1 L (pH 10.1). After **bleach**-fixing, the images showed a high color reflection d. (2.50-2.54) and low fog (0.03). A control film having a 65% av. AgBr content showed a reflection d. 1.98-2.26, and a control having a 37% av. AgBr content but not contg. II gave a d. 2.01-2.21. Continuous development tests using a replenisher showed very stable color d. and fog.

ST color photog paper pyrazolidinone deriv

IT 13047-13-7 99789-49-8

(photog. color paper with layer contg.)

IT 100-51-6, uses and miscellaneous 102-71-6, uses and miscellaneous 584-08-7 7207-43-4 7647-14-5, uses and miscellaneous 7758-02-3, uses and miscellaneous 10039-54-0 10117-38-1 12224-02-1

**85985-29-1**

(photog. developer contg., for color paper contg. gelatin layer with pyrazolidinone derivs.)

IT 31037-84-0 54636-84-9 61119-59-3

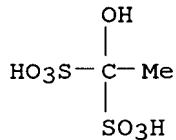
(photog. multilayer paper with gelatin layer contg. pyrazolidinone deriv. and emulsion layer contg.)

**85985-29-1**

(photog. developer contg., for color paper contg. gelatin layer with pyrazolidinone derivs.)

RN 85985-29-1 HCPLUS

CN 1,1-Ethanedisulfonic acid, 1-hydroxy- (9CI) (CA INDEX NAME)



L10 ANSWER 12 OF 20 HCPLUS COPYRIGHT 2000 ACS

AN 1982:53748 HCPLUS

DN 96:53748

TI A process for selectively decolorizing **dyed** substrates

IN Clough, Donald Keighley; Lister, Gordon Hobson

PA Sandoz Products Ltd., UK

SO Brit., 4 pp.  
CODEN: BRXXAA  
DT Patent  
LA English  
IC D06P005-02  
CC 40-6 (Textiles)  
FAN.CNT 1

Best Available Copy

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--------------|------|----------|-----------------|----------|
| PI   | GB 1591616   | A    | 19810624 | GB 1978-5140    | 19780306 |
| PRAI | GB 1976-5140 |      | 19761209 |                 |          |

AB Noncovalently bound **dye** on fabrics **printed** or **dyed** with fiber-reactive **dyes** is selectively decolorized by **redn.** using a liquor contg. sulfoxylate ions. Thus, **peroxide-bleached** cotton was **dyed** with 6.0 parts Reactive Red 132 in 776 parts liquor by conventional methods. The **dyeing** was rinsed 15 min in 776 parts water at 80.degree. and immersed in a liquor contg. Na formaldehyde sulfoxylate [149-44-0] 1552, NaOH 776.0, and 40% HCHO 194.0 parts in 776 parts water. The temp. was raised during 23 min from 16 to 85.degree. and maintained 50 min at 85.degree.. After running off the liquor the **dyeing** was soaped with 310 parts K pyrophosphite and 109 parts sulfonated castor oil Na salt in 776 parts water and the temp. was raised during 20 min from 16 to 95.degree. and kept 10 min at 95.degree. followed by rinsing 10 min in 776 parts cold water to give a **dyeing** with improved wet fastness.

ST decolorizing selective **dyed** fabric; **printed** fabric  
selective decolorizing; sulfoxylate **redn** reactive **dye**

IT **Dyes**, reactive

(decolorizing of noncovalently bound, by **redn.** with sulfoxylate ions)

IT Fading

(fastness to, of fabrics **dyed** or **printed** with reactive **dyes**, selective decolorizing by **redn.** for improved)

IT Reduction

(of noncovalently bound **dyes**, with sulfoxylate ions, for improved wet fastness)

IT 149-44-0 4378-67-0 24887-06-7

RL: RCT (Reactant)

(**redn.** by, of noncovalently bound **dyes**, for improved wet fastness)

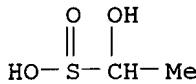
IT 4378-67-0

RL: RCT (Reactant)

(**redn.** by, of noncovalently bound **dyes**, for improved wet fastness)

RN 4378-67-0 HCAPLUS

CN Ethanesulfinic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

L10 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1981:517040 HCAPLUS

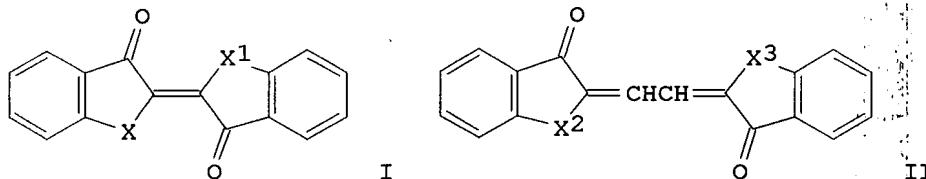
DN 95:117040

TI Theoretical and spectroscopic studies on indigo **dyes**. XXII. Syntheses of 5,5'- and 6,6'-dialkylated indigo **dyes**

AU Meier, Helmut; Luettke, Wolfgang

CS Org. Chem. Inst., Univ. Goettingen, Goettingen, D-3400, Fed. Rep. Ger.

SO Liebigs Ann. Chem. (Best Available Copy) 2043-33  
CODEN: LACHDL; ISSN: 0170-2041  
DT Journal  
LA German  
CC 40-5 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
GI



AB A series of 5,5'- and 6,6'-dialkylated indigo **dyes** I (X, X1 = NH), I (X, X1 = S), I (X = NH, X1 = S), II (X2, X3 = NH), II (X2, X3 = S), and II (X2 = NH, X3 = S) were prepd. by various synthetic methods. Some of these I and II show good solv. and can be used for spectroscopic measurements even in nonpolar solvents.

ST indigo dialkylated **dye**; thioindigo dialkylated; spectrum  
indigoid dialkylated **dye**

IT **Dyes**

(5,5'- and 6,6'-dialkylated indigo derivs., prepn. and spectra of)

IT Nuclear magnetic resonance

etc.

Ultraviolet and visible spectra

(of 5,5'- and 6,6'-dialkylated indigo **dyes**)

IT 20637-04-1

RL: RCT (Reactant)

(Grignard reaction of, with isoamyl bromide)

IT 79097-35-1 79097-36-2

RL: RCT (Reactant)

(cyclization of)

IT 79097-85-1

(dialkylated indigo **dyes** from)

IT 95-92-1

(in manuf. of dialkylindigo **dyes**)

IT 79097-31-7 79097-32-8 79097-33-9

RL: RCT (Reactant)

(oxidative dimerization of)

IT 79098-20-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and dechlorination of)

IT 79097-64-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction with chloroacetyl chloride)

IT 79097-44-2P 79098-17-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and redn. of)

IT 61391-12-6P 61391-13-7P 62025-38-1P 64361-19-9P 76372-74-2P

79097-26-0P 79097-27-1P 79097-28-2P 79097-29-3P 79097-30-6P

79097-51-1P 79097-52-2P 79097-53-3P 79097-54-4P 79097-55-5P

79097-56-6P 79097-57-7P 79097-58-8P 79097-59-9P 79097-60-2P

79097-72-6P 79097-73-7P 79097-74-8P 79097-75-9P 79097-76-0P

79097-77-1P 79097-78-2P 79097-79-3P 79097-80-6P 79097-81-7P

79097-82-8P 79097-83-9P 79105-77-4P 79105-79-6P 79105-80-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and spectra of)

IT 769-92-6P 1130-58-1P 1962-66-9P 3362-32-1P 4237-70-1P 4365-63-3P

14962-12-0P 33228-44-3P 58348-10-0P 79097-37-3P 79097-38-4P

79097-39-5P 79097-40-8P 79097-41-9P 79097-42-0P 79097-43-1P

79097-47-5P 79097-48-6P 79097-62-4P 79097-63-5P 79097-65-7P

|                                                                    |                                                                                               |             |             |             |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------|-------------|-------------|
| 79097-66-8P                                                        | 79097-Best Available Copy                                                                     | 79097-69-0P | 79097-69-1P | 79097-70-4P |
| 79097-71-5P                                                        | 79097-86-2P                                                                                   | 79097-87-3P | 79097-88-4P | 79097-89-5P |
| 79097-90-8P                                                        | 79097-91-9P                                                                                   | 79097-92-0P | 79097-93-1P | 79097-94-2P |
| 79097-95-3P                                                        | 79097-96-4P                                                                                   | 79097-97-5P | 79097-98-6P | 79097-99-7P |
| 79098-00-3P                                                        | 79098-01-4P                                                                                   | 79098-02-5P | 79098-03-6P | 79098-04-7P |
| 79098-05-8P                                                        | 79098-06-9P                                                                                   | 79098-07-0P | 79098-08-1P | 79098-09-2P |
| 79098-10-5P                                                        | 79098-11-6P                                                                                   | 79098-12-7P | 79098-13-8P | 79098-14-9P |
| 79098-15-0P                                                        | 79098-16-1P                                                                                   | 79098-19-4P | 79105-75-2P | 79105-76-3P |
| 79105-78-5P                                                        | 79105-81-0P                                                                                   | 79105-82-1P |             |             |
| RL: SPN (Synthetic preparation); PREP (Preparation)<br>(prepn. of) |                                                                                               |             |             |             |
| IT 79-04-9                                                         | RL: RCT (Reactant)<br>(reaction of, with (dimethylpentyl)methylacetanilide)                   |             |             |             |
| IT 79097-84-0                                                      | RL: RCT (Reactant)<br>(reaction of, with acetyl toluidine)                                    |             |             |             |
| IT 141-82-2, reactions                                             | RL: RCT (Reactant)<br>(reaction of, with alkylanilines)                                       |             |             |             |
| IT 79097-46-4                                                      | RL: RCT (Reactant)<br>(reaction of, with base)                                                |             |             |             |
| IT 138-89-6                                                        | RL: RCT (Reactant)<br>(reaction of, with benzothiophene deriv.)                               |             |             |             |
| IT 332-77-4                                                        | RL: RCT (Reactant)<br>(reaction of, with benzothiophenone deriv.)                             |             |             |             |
| IT 79097-49-7 79097-50-0                                           | RL: RCT (Reactant)<br>(reaction of, with bromoacetylindoxyls)                                 |             |             |             |
| IT 79097-61-3                                                      | RL: RCT (Reactant)<br>(reaction of, with chloroacetophenone deriv.)                           |             |             |             |
| IT 112-67-4                                                        | RL: RCT (Reactant)<br>(reaction of, with chlorobenzene)                                       |             |             |             |
| IT 100-41-4, reactions                                             | RL: RCT (Reactant)<br>(reaction of, with chloromethylbutane in presence of aluminum chloride) |             |             |             |
| IT 108-88-3, reactions                                             | RL: RCT (Reactant)<br>(reaction of, with chloromethylbutane in presence of ferric chloride)   |             |             |             |
| IT 537-92-8                                                        | RL: RCT (Reactant)<br>(reaction of, with dimethylvaleryl chloride)                            |             |             |             |
| IT 594-36-5                                                        | RL: RCT (Reactant)<br>(reaction of, with ethylbenzene in presence of aluminum chloride)       |             |             |             |
| IT 79098-18-3                                                      | RL: RCT (Reactant)<br>(reaction of, with hydrogen chloride)                                   |             |             |             |
| IT 107-22-2                                                        | RL: RCT (Reactant)<br>(reaction of, with methylindolone deriv.)                               |             |             |             |
| IT 79097-45-3                                                      | RL: RCT (Reactant)<br>(reaction of, with nitromethane)                                        |             |             |             |
| IT 79097-34-0                                                      | RL: RCT (Reactant)<br>(reaction of, with nitrosoaniline deriv.)                               |             |             |             |
| IT 108-90-7, reactions                                             | RL: RCT (Reactant)<br>(reaction of, with palmitoyl chloride)                                  |             |             |             |
| IT 105-53-3                                                        | RL: RCT (Reactant)                                                                            |             |             |             |

IT 931-78-2  
 RL: RCT (Reactant)  
 (reaction of, with toluene)

IT 594-36-5  
 RL: RCT (Reactant)  
 (reaction of, with toluene in presence of ferric chloride)

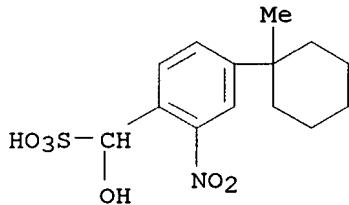
IT 56108-12-4  
 RL: RCT (Reactant)  
 (rearrangement of, to aniline deriv.)

IT 25017-08-7  
 RL: RCT (Reactant)  
 (redn. of)

IT 79097-46-4  
 RL: RCT (Reactant)  
 (reaction of, with base)

RN 79097-46-4 HCAPLUS

CN Benzenemethanesulfonic acid, .alpha.-hydroxy-4-(1-methylcyclohexyl)-2-nitro-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L10 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1979:46553 HCAPLUS  
 DN 90:46553  
 TI Photographic **dye-bleach** solutions  
 IN Nakamura, Takashi  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC G03C005-52  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 1

|    | PATENT NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|----------|
| PI | JP 53074425                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A2   | 19780701 | JP 1976-150429  | 19761215 |
| AB | <b>Dye-bleach</b> solns. for the Ag <b>dye</b><br><b>bleach</b> process contain an acid, a H <sub>2</sub> O-sol. iodide, and .gtoreq.1<br>compd. selected from aldehydes and adducts of aldehydes with bisulfites.<br>The addn. of the aldehyde derivs. improves the stability of the<br><b>dye-bleach</b> solns. and also <b>reduces</b> yellowing<br>in the highlight areas of the photog. materials. Thus, a com. photog.<br>material (Fujichrome CBP 6206) was exposed through a pos., black-and-white<br>developed, <b>dye-bleached</b> in a soln. contg.<br>glutaraldehyde bisulfite 4, sulfamic acid 100, KI 40 g, PhCH <sub>2</sub> OH 10, a 50%<br>HOAc soln. 10 mL, and Lumichrome 13 mg/L, and subsequently <b>bleach</b><br>-fixed to give a <b>print</b> having excellent color b <sup>al</sup> ance, and no<br>yellowing in the highlight areas. The <b>dye-bleach</b><br>soln. did not show any sign of degrdn. even after 1 mo storage.<br><b>ST</b> aldehyde photog <b>dye bleach</b> soln |      |          |                 |          |

IT Aldehydes, uses and ~~Best Available Copy~~

RL: USES (Uses)

(color photog. **dye-bleach** solns. contg. iodide,  
acid and)

## IT Photographic processing

(color, **dye-bleach** solns. contg. iodide, acid and  
aldehyde for)

## IT 7681-11-0, uses and miscellaneous

RL: USES (Uses)

(color photog. **dye-bleach** solns. contg. aldehyde,  
acid and)

## IT 5450-96-4 7420-89-5

RL: USES (Uses)

(color photog. **dye-bleach** solns. contg. iodide,  
acid and)

## IT 104-15-4, uses and miscellaneous 5329-14-6

RL: USES (Uses)

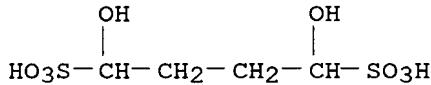
(color photog. **dye-bleach** solns. contg. iodide,  
aldehyde and)

## IT 5450-96-4 7420-89-5

RL: USES (Uses)

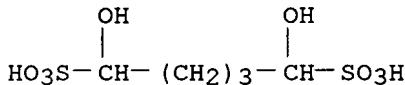
(color photog. **dye-bleach** solns. contg. iodide,  
acid and)

RN 5450-96-4 HCPLUS

CN 1,4-Butanedisulfonic acid, 1,4-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)

●2 Na

RN 7420-89-5 HCPLUS

CN 1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, disodium salt (7CI, 8CI, 9CI)  
(CA INDEX NAME)

●2 Na

L10 ANSWER 15 OF 20 HCPLUS COPYRIGHT 2000 ACS

AN 1974:21385 HCPLUS

DN 80:21385

TI Stabilizer for photographic silver halide materials

PA Fuji Photo Film Co. Ltd.

SO Brit., 5 pp.

CODEN: BRXXAA

DT Patent

LA English

IC G03C

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 2

| PATENT NO.    | KIND  | DATE     | APPLICATION NO. | DATE     |
|---------------|-------|----------|-----------------|----------|
| -----         | ----- | -----    | -----           | -----    |
| PI GB 1332842 | A     | 19731003 | GB 1971-19945   | 19710610 |

PKAI JP 1970-49635 19700610

AB A hardener-stabilizer bath contg. NH<sub>4</sub>CNS, an Al compd., a sulfite, and an aliph. aldehyde or ketone showed little image fading, **reduced** photog. **print** tackiness, and did not corrode stainless steel. Thus, an activated **print** stabilized by a 10-sec immersion in a soln. contg. NH<sub>4</sub>CNS 200, NaOAc.3H<sub>2</sub>O 50, HOAc 70, KAl(SO<sub>4</sub>)<sub>2</sub>.12H<sub>2</sub>O 80, K<sub>2</sub>S<sub>2</sub>O<sub>5</sub> 66.5, OHC(CH<sub>2</sub>)<sub>3</sub>CHO 70 g, 1-phenyl-5-mercaptopotetrazole (0.5% in MeOH) 50 ml, and H<sub>2</sub>O to 1000 ml, was not tacky and did not fade after prolonged storage. Stainless steel was not corroded after immersion in the soln. for one day.

ST stabilizer hardener photog noncorrosive; silver halide photog stabilizer; rapid processing photog stabilizer

IT Photographic stabilizers

(ammonium thiocyanate-hardener solns. as, for **reducing** **print** stickiness)

IT Photographs

(image stabilization, by ammonium thiocyanate-hardener solns.)

IT 50-00-0, uses and miscellaneous 86-93-1 111-30-8 304-59-6

540-92-1 1762-95-4 2349-67-9 7446-70-0, uses and

miscellaneous 7631-90-5 10043-01-3 10043-67-1

(photog. hardener-stabilizer solns. contg.)

IT 16731-55-8

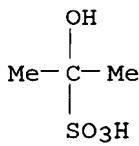
(photog. harder-stabilizer solns. contg.)

IT 540-92-1

(photog. hardener-stabilizer solns. contg.)

RN 540-92-1 HCPLUS

CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

L10 ANSWER 16 OF 20 HCPLUS COPYRIGHT 2000 ACS

AN 1973:73579 HCPLUS

DN 78:73579

TI Reducing compositions for **dyeing** and **printing** with the aid of vat and sulfur **dyes**

IN Helouis, Jean Pierre; Perronin, Jean

PA Ugine Kuhlmann

SO Fr., 6 pp.

CODEN: FRXXAK

DT Patent

LA French

IC D06P

CC 39-7 (Textiles)

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

PI FR 1599687 19700828 FR 1967-128202 19671115

AB Stable **reducing** baths contg. Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub>, RR<sub>1</sub>C(OH)SO<sub>3</sub>Na (R = H, Me, Et; R<sub>1</sub> = H, Me), and Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> in aq. NaOH were used in high temp. 2-phase **printing** of cotton and viscose fabric. Cotton was **printed** with a Solanthrene Brown paste and developed by foularding in a **reducing** bath contg. Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> 33, sodium 1-hydroxyethanesulfonate [918-04-7] 10, sodium 1-hydroxy-1-methylethanesulfonate [540-92-1] 3.5, NaOH 110, and Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> 10 g/l to give a 2-color

printed pattern. The ~~Best Available Copy~~ in advance and was stable 9 days at 20. deg.. Other reducing baths contained sodium 1-hydroxy-1-methylpropanesulfonate [30723-93-4] and sodium hydroxymethanesulfonate [870-72-4].

ST hydroxyethanesulfonate reducing bath; dye redn hydroxyalkanesulfonate; cotton printing dye redn

IT Dyeing

Textile printing  
(of cellulosic textiles, reducing agents for, sodium hydroxyalkanesulfonate and sodium hydrosulfite as)

IT Rayon, uses and miscellaneous  
RL: USES (Uses)  
(printing on fabrics of, reducing agents for, sodium hydroxyalkanesulfonates and sodium hydrosulfite as)

IT Reducing agents  
(sodium hydroxyalkanesulfonate and sodium hydrosulfite, for printing of cellulosic textiles)

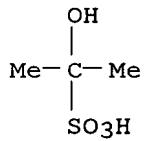
IT 540-92-1 870-72-4 918-04-7 30723-93-4  
RL: USES (Uses)  
(reducing agents from sodium hydrosulfite and, for printing of cellulosic textiles)

IT 7775-14-6  
RL: USES (Uses)  
(reducing agents from sodium hydroxyalkanesulfonates and, for printing of cellulosic textiles)

IT 540-92-1 918-04-7 30723-93-4  
RL: USES (Uses)  
(reducing agents from sodium hydrosulfite and, for printing of cellulosic textiles)

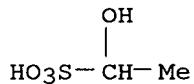
RN 540-92-1 HCAPLUS

CN 2-Propanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



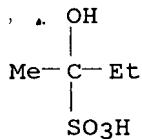
● Na

RN 918-04-7 HCAPLUS  
CN Ethanesulfonic acid, 1-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

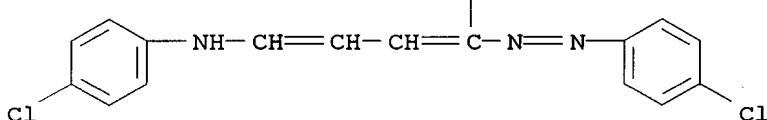
RN 30723-93-4 HCAPLUS  
CN 2-Butanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

L10 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1972:60905 HCAPLUS  
 DN 76:60905  
 TI Aromatic diazo and azo compounds. LXXXVI. Diazo coupling with  
 the Bucherer adduct of pyridine  
 AU Allan, Z. J.; Podstata, J.; Vrba, Z.  
 CS Vyzk. Ustav. Org. Syth., Pardubice-Rybitvi, Czech.  
 SO Collect. Czech. Chem. Commun. (1971), 36(9), 3181-6  
 CODEN: CCCCAK  
 DT Journal  
 LA English  
 CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 Section cross-reference(s): 27  
 AB The 1:3 adduct of C5H5N with NaHSO3 (probably tri-Na 2,4,6-piperidinetrisulfonate [34039-51-5]) was treated with aq. PhN2Cl in the presence of CaCO3 to give yellowish green 3-phenylazo-1,4,5,6-tetrahydropyridine-4,6-disulfonic acid (I) [34039-52-6] and small amts. of yellow 3-(phenylazo)-2H-pyran-2-sulfonic acid (II) [34224-09-4] and yellowish red Na 5-anilino-1-hydroxy-2-(phenylazo)-2,4-pentadiene-1-sulfonate (III) [34033-97-1]. Redn. of I with Zn in NH4OH gave 3-aminopyridine and PhNH2. The diazo compds p-MeC6H4N2Cl and p-ClC6H4N2Cl reacted similarly to PhN2Cl.  
 ST tetrahydropyridine azo compd; pyridine azo compd; pyran azo compd; Bucherer adduct pyridine; azo coupling pyridine deriv; bisulfite adduct pyridine  
 IT Dyes, azo  
 (from pyridine Bucherer adduct)  
 IT Coupling reaction  
 (of benzenediazonium derivs. with pyridine Bucherer adduct)  
 IT 34039-51-5  
 RL: RCT (Reactant)  
 (coupling of, with benzenediazonium derivs.)  
 IT 34224-09-4P 35226-11-0P 35226-12-1P **35226-13-2P**  
 35288-71-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 IT **35226-13-2P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 35226-13-2 HCAPLUS  
 CN 2,4-Pentadiene-1-sulfonic acid, 5-[(4-chlorophenyl)amino]-2-[(4-chlorophenyl)azo]-1-hydroxy-, barium salt (2:1) (9CI) (CA INDEX NAME)

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●1/2 Ba

L10 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1971:23593 HCAPLUS

DN 74:23593

TI Reducing compositions for dyeing baths

IN Helouis, Jean P. R.; Perronin, Jean

PA Ugine Kuhlmann

SO Ger. Offen., 30 pp.

CODEN: GWXXBX

DT Patent

LA German

IC D06P

CC 39 (Textiles)

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | DE 1920428 | A    | 19701029 | DE 1969-1920428 | 19690422 |
|    | DE 1920428 | C3   | 19760422 |                 |          |

AB Dyeing baths for vat or S dyes, used in 2-stage printing or high-temperature dyeing cotton or similar textiles, contained a hydrosulfite, e.g. Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub>, and RR<sub>1</sub>C(OH)SO<sub>3</sub>X (R and R<sub>1</sub> = H, aliphatic, or cyclic radical, and X = H or Na). The comps. were storable at room temp. for several weeks without aging. A typical compn. consisted of Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> 33, MeCH(OH)SO<sub>3</sub>Na 10, Me<sub>2</sub>C(OH)SO<sub>3</sub>Na 3.5, NaOH (36.degree. Be) 110, and Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> 10 g/l.

ST reducing agents vat sulfur dyes; vat dyes  
reducing agents; sulfur dyes reducing agents;  
dyes reducing agents; cotton dyeing  
reducing agents

IT Reducing agents  
(dithionites-hydroxysulfonates, for dyeing baths)

IT Dyeing  
(reducing agents for, dithionites-hydroxysulfonates as)

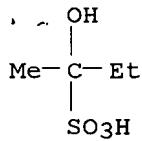
IT 1561-96-2 1562-00-1 7775-14-6 30723-93-4

RL: USES (Uses)  
(reducing agents, for dyeing baths for cotton  
fabrics)

IT 30723-93-4  
RL: USES (Uses)  
(reducing agents, for dyeing baths for cotton  
fabrics)

RN 30723-93-4 HCAPLUS

CN 2-Butanesulfonic acid, 2-hydroxy-, monosodium salt (8CI, 9CI) (CA INDEX  
NAME)



● Na

L10 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2000 ACS

AN 1968:70133 HCAPLUS

DN 68:70133

TI **Vat dye printing**

PA Brueggemann, L., K.-G.

SO Ger., 3 pp.

CODEN: GWXXAW

DT Patent

LA German

IC D06Q

CC 39 (Textiles)

FAN.CNT 1

|  | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------------|------|------|-----------------|------|
|--|------------|------|------|-----------------|------|

PI DE 1258824 19680118 DE 19610412

AB Alkali- and ammonium salts of BzH sulfoxylic acid, preferably PhCH(OH)SO<sub>2</sub>Na (I), are used as **reducing** agents in the **printing** of **textiles** with vat or sulfur **dyes** in the two-step **printing** method. Thus, a cotton fabric was **printed** with the following **printing** paste contg. 10% aq. paste of C.I. 59,855 150, H<sub>2</sub>O 50, 3% aq. locust bean gum 600, and 10% dextrin 200 parts. After **printing** and drying, the fabric was padded with an aq. soln. contg. H<sub>2</sub>O 905, NaOH 50, NaBO<sub>3</sub> 5, and I 40 parts and finally steamed 30 sec. at 115.degree..

ST **PRINTING DYEING FABRICS; DYEING**

**PRINTING FABRICS; FABRICS PRINTING DYEING**

IT **Textile printing**

(on cotton and rayon with sulfur and vat **dyes** with benzaldehyde sulfoxylate **reducing** agents in two-phase process)

IT Rayon, uses and miscellaneous

RL: USES (Uses)

(**printing** on, with sulfur and vat **dyes** with benzaldehyde sulfoxylate **reducing** agents in two-phase process)

IT 4657-12-9

RL: USES (Uses)

(**printing** on cotton and rayon with sulfur and vat **dyes** in presence of **reducing**)

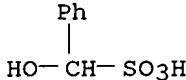
IT 4657-12-9

RL: USES (Uses)

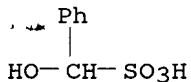
(**printing** on cotton and rayon with sulfur and vat **dyes** in presence of **reducing**)

RN 4657-12-9 HCAPLUS

CN Benzenemethanesulfonic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

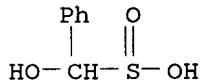


● Na

L10 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1967:455110 HCAPLUS  
 DN 67:55110  
 TI Continuous coloring of strips of fibrous material with vat or sulfur  
**dyes**  
 PA Brueggemann, L., K.-G.  
 SO Ger., 2 pp.  
 CODEN: GWXXAW  
 DT Patent  
 LA German  
 IC D06P  
 CC 39 (Textiles)  
 FAN.CNT 1

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| PI DE 1240035 |      | 19670511 | DE              | 19620327 |

AB A process for the continuous **dyeing** of fiber material with vat  
 or sulfur **dyes**, based on steam developing, is described. One of  
 the **reducing** media is a compd. of the type  $\text{ACH}(\text{OH})\text{SO}_2-\text{Z}^+$  (I),  
 where A is Ph or an alkylphenyl, hydroxyphenyl, alkoxyphenyl, aminophenyl,  
 halophenyl, or sulfophenyl residue and Z is an alkali metal or  $\text{NH}_4$ . Thus,  
 cotton cloth was placed in a 2-roll padder with 25 parts Vat Black 19, 80  
 parts aq.  $\text{NaOH}$  (38.degree. Be.), and 50 parts I ( $\text{A} = \text{Ph}$  and  $\text{Z} = \text{Na}^+$ ). The  
 cloth was steamed 80-90 sec. at 110-20.degree. to give a reversible cloth.  
 ST VAT DYES; ALDEHYDE SULFOXYLATES; SULFUR DYES;  
 DYEING PROCESS; SULFOXYLATES ALDEHYDE  
 IT **Dyeing**  
     (reducing agent in, sodium salt of .alpha.-hydroxy-.alpha.-  
     toluenesulfinic acid as, for use with sulfur or vat **dyes**)  
 IT **Reducing agents**  
     (sodium salt of .alpha.-hydroxy-.alpha.-toluenesulfinic acid as, for  
     dyeing with sulfur or vat **dyes**)  
 IT 14339-77-6  
 RL: USES (Uses)  
     (as **reducing** agent in **dyeing**)  
 IT 14339-77-6  
 RL: USES (Uses)  
     (as **reducing** agent in **dyeing**)  
 RN 14339-77-6 HCAPLUS  
 CN Benzenemethanesulfinic acid, .alpha.-hydroxy-, monosodium salt (9CI) (CA  
     INDEX NAME)



● Na

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